HEARINGS

BEFORE THE

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE

OF THE

U.S. HOUSE OF REPRESENTATIVES

ON

H. R. 7557

TO PROMOTE THE SAFE TRANSPORTATION OF EXPLOSIVES

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COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
HOUSE OF REPRESENTATIVES,
Washington, D. C., Friday, February 7, 1908.

The committee met this day at 10.30 o'clock a. m., Hon. William P. Hepburn (chairman) presiding.

Mr. SHERMAN. Mr. Chairman, General Humphrey and several other gentlemen are here present in reference to the bill to regulate the transportation of explosives, which is made a special order for to-day.

Mr. MANN. That is bill H. R. 7557.

Mr. SHERMAN. Mr. Chairman, Doctor Dudley is also here, to explain the provisions and purposes of the bill, H. R. 7557, as to the transportation of explosives.

The CHAIRMAN. Very well. Doctor, give to the stenographer your full name and address.

STATEMENT OF DR. CHARLES B. DUDLEY, OF ALTOONA, PA., CHIEF CHEMIST, PENNSYLVANIA RAILROAD COMPANY.

Doctor DUDLEY. My name is Charles B. Dudley. I am the chemist of the Pennsylvania Railroad and president of the bureau for the safe transportation of explosives. I think that covers the ground. My residence is Altoona, Pa.

Mr. ESCH. Did you appear before the committee at a former hearing on this subject, two or three years ago, with Mr. McCrea?

Doctor DUDLEY. Yes. Will you prefer, Mr. Chairman, to ask questions, or——

The CHAIRMAN. If you will go on in the first place and state what you have in mind it will be agreeable to us, and then we may ask questions afterwards.

Doctor DUDLEY. I would like to say that the necessity for this bill seems to be, very briefly, as follows: First, there is quite a body of legislation in the statutes of the United States that is antiquated, that is not applicable to the present conditions of the manufacture and transportation of explosives; legislation that carries a serious penalty with it for the violation of the law; and one of the purposes of this bill is to ask you to substitute this legislation, which is believed to be up to date, for all previous antiquated legislation. That is one of the purposes of the bill.

Second, uniformity in the regulations applying to the different railroads has been found to be of the utmost importance in securing the enforcement of such precautions as are necessary to produce safety in transportation. If one railroad has one set of regulations and another railroad has another set, or if one has none and another has good regulations that are essential for its safety, the one having

no regulations would get the bulk of the business, and consequently there will be no control. That has been one of the difficulties in getting uniformity in the way of safety in transportation.

Perhaps I should go back a moment and say that instead of asking Congress to take complete supervision of this whole matter of the manufacture, storage, and transportation of explosives, it has been decided after a good deal of discussion—and the bill was brought before you four years ago with the idea in mind of asking Congress to do that very thing—I say it has been decided to be advisable to allow the manufacturers of explosives and the transportation companies to handle the matter themselves, independent of Congressional action, if possible. That attempt is being made now, and here is a galley proof of regulations that have been agreed upon, or are in process of being agreed upon, as a revision of the regulations now in force by some 93 of the largest railroads, representing 140,000 miles out of a total of 235,000 miles of railroad in Canada and the United States and Mexico.

I say these regulations are agreed upon by the American Railroad Association and 93 of these railroads, to get uniformity in the methods that are essential for producing safety in transportation. Now we run up against two or three difficulties in securing this uniformity. Some of the railroads do not want any regulation. They say they do not, but as a matter of fact they do. Some say, "We will not bother about that thing. Our revenue from explosives is very small." And yet it is essential that there should be cooperation, and therefore we have introduced one clause into this bill requiring every railroad in the United States to provide regulations for safety in transportation.

Another very peculiar state of affairs, as an incident of the matter at present, is that if a shipper offers a transportation company any product of any kind whatever and misrepresents that shipment for the sake of securing a lower rate, under the present legislation of the interstate-commerce act we can go for him. But if he misrepresents the shipment and pays the rate—for instance, if he offers us dynamite under the name of some other article in class 1, the first classification, the highest rate, and pays that rate—we can not touch him. There is no possibility of prosecuting or getting any claim or hold, as we understand it, on any man who misrepresents a shipment. So we have introduced a section in the bill to make it a criminal offense to misrepresent a shipment.

Mr. BARTLETT. What section is that?

Doctor DUDLEY. The bill is No. 7557, and the section——

Mr. MANN. It is section 5.

Doctor DUDLEY. Yes; section 5. Again, we are a good deal troubled in this way: Some of you may not know it, and it is not very pleasant to hear, but we have actually found men taking explosives in dress-suit cases on our passenger trains, and taking them to their places of business, through the streets, on a street car, into the Broad Street Station, and down somewhere to Delaware to be used.

We therefore want a general regulation, covering interstate commerce, to make it criminal to carry explosives on a passenger train except in very limited amounts, as section 1 provides in the proviso, which is essential for carrying on the business.

Those are the three or four essential points which it is desired to cover in this bill.

Mr. BARTLETT. You refer to samples?

Doctor DUDLEY. Yes. There is no way by which we can get the necessary data for investigations except by samples. Now, I can go into details on the situation to-day in the transportation, but it is for you to say if you want to hear them.

Mr. BARTLETT. You include in a general term "gunpowder" under the subject of explosives, do you not?

Doctor DUDLEY. We say "gunpowder or other explosives."

Mr. BARTLETT. That would include any kind of gunpowder?

Doctor DUDLEY. Yes.

Mr. BARTLETT. How much gunpowder could a man carry in going hunting?

Doctor DUDLEY. Half a pound.

Mr. BARTLETT. Then a man would have to walk or ride in a carriage or an automobile in really going hunting from one State to another?

Doctor DUDLEY. Ammunition is provided for. Fixed ammunition in any amount can be carried.

The CHAIRMAN. Would not 1 pound of gunpowder, exploded in a passenger car, cause some trouble?

Doctor DUDLEY. Yes; 1 pound of gunpowder exploded in a passenger car would give rise to considerable trouble. But in every country there is some minimum shipment allowed for laboratory purposes. Half a pound is about the smallest quantity that could be used. A man could have 10 pounds of dynamite on a car at one time, but there must be 20 half-pound packages of it; and it is an interesting thing to know that it has been found in the transportation of explosives that the division of the explosive into small packages is a great safeguard. That is one of the reasons why fixed ammunition is almost relieved from any regulations or restraint at all. Each piece of ammunition is done up by itself and placed in a little division in a paper box, so that an explosion in one does not affect the rest to any serious extent; so that it is believed that this is as good as we could do under the conditions.

The CHAIRMAN. That separation into compartments would not affect dynamite, would it?

Doctor DUDLEY. We have to have small samples of dynamite.

The CHAIRMAN. If there were 20 half-pound packages of dynamite in the same suit case and one of the packages exploded, several others would explode too, would they not?

Doctor DUDLEY. That depends on how it is done up. I do not know that that experiment has ever been positively tried [laughter], but I think it would depend on how it is done up. If each package is done up separately in several thicknesses of heavy brown paper, I do not think the explosion of one would explode all.

Now, there is a peculiar property in explosives, and that is that the more that the material is cushioned in any way the less it seems to be liable to transmit the explosion.

Mr. MANN. In time of war or trouble would this prevent the carrying of ammunition?

Doctor DUDLEY. We have thought of that, and we have assumed that in time of war military necessity takes precedence over everything, even setting aside acts of Congress.

Mr. MANN. No; it does not. [Laughter.]

Doctor DUDLEY. We have assumed there would be no difficulty arising in that case.

Mr. BARTLETT. You are judging of the present law, and you take it for granted that the President would be Commander in Chief of the Army and Navy, and that he would set it aside.

Mr. MANN. He could not set aside an act of Congress.

Mr. ADAMSON. He does not have to set them aside. He can go on without regard to them.

Mr. MANN. Would this affect artillery ammunition on railroad trains?

Doctor DUDLEY. During the Spanish-American war we were asked at Altoona whether it would be safe to carry fixed ammunition on passenger trains, and——

Mr. MANN. I am not talking about passenger trains but freight trains, filled with troops, carrying ammunition along with them, or filled with artillery. Would not the men in charge of it carry with them the necessary ammunition for the guns?

Doctor DUDLEY. I think so, because I do not see how it would be possible to do it in any other way.

Mr. MANN. Those men are not carrying it for hire.

Doctor DUDLEY. They are allowed to carry it on a freight train.

Mr. MANN. Not on any train where you carry passengers for hire.

Mr. DWINNELL. Section 4 forbids the transportation of certain explosives by a carrier in the transportation of passengers or articles of commerce by land or water, but the proviso of section 1 permits the transportation of certain explosives, providing they are not carried in the part of the vessel or vehicle which is intended for the transportation of passengers for hire. That was drawn for the purpose of covering such trains as have passengers and freight.

Mr. MANN. It will be unlawful to carry these things on any train.

Mr. DWINNELL. The language is "vehicles" instead of "trains."

Mr. SHERMAN. Then you maintain, Mr. Dwinnell, that you may have a train of four freight cars filled with the highest character of explosives and may attach to that one passenger car and carry passengers in that?

Mr. DWINNELL. I think so.

Doctor DUDLEY. There is nothing to prevent it, sir; and I would like to say for your information, gentlemen, that that is a situation that is absolutely essential and can not be met, so far as we can see, in any other way, because there is a very large percentage of trains in the mining regions known as "mixed trains," made up of freight and passenger cars.

Mr. MANN. Would this bill permit the carrying of high explosives in freight cars composing a train made up of freight cars and one or more passenger cars?

Doctor DUDLEY. The freight cars under this bill can have high explosives or any other explosive in them, and at the end of a freight train a passenger car or train can be attached, under this bill. It is practically impossible to get explosives to the place where they want to use them without such a provision, and at the same time meet the

passenger traffic that is required. In the sparsely settled portions of the country there are a very large number of branch roads that are operated only with what are known as "mixed trains," freight and passenger. Now, the bill prohibits the putting of explosives on the passenger car, but it does not prohibit the carrying of the explosives on the train elsewhere than directly where the passengers are.

The CHAIRMAN. Suppose a train of five cars, consisting of four freight cars followed by a passenger car, and the explosive, say a ton of high explosive, should be exploded in the first car; would there be any harmful effect upon the rear car, in your judgment?

Doctor DUDLEY. I should say that so small an amount as a ton, sir, could not cause any very serious difficulty to the passenger car.

The CHAIRMAN. Suppose it would be a carload, then?

Doctor DUDLEY. We had a case where a carload of dynamite was exploded in the yard at Crestline, Ohio, and the men walking along the same track about six or eight cars in the rear, with freight cars between in a continuous line, were not injured. Of course I could not guarantee you that. I would not insure you that four cars away from where a car went out everybody would be perfectly safe, but——

The CHAIRMAN. I saw once the effect of an explosion of 800 boxes—8,000 boxes—of dynamite in sticks, 100 in a box, each one wrapped in tissue paper, and every object within 100 yards of the location of that car was crushed down, not blown up; buildings and other cars, and a turntable that was 200 feet away, made of heavy 12 by 12 timbers, planked with 4-inch plank a foot apart—these timbers were a foot apart—and this planking was broken and crushed down between the 12-inch timbers, broken in three pieces all the way along. Everything was crushed downward. The theory, as a gentleman explained it, was that the atmosphere was suddenly thrown up, and then, upon the return, after the removal of the force, the weight of the atmosphere crushed everything within a distance of three or four hundred feet. I was there the next morning.

Doctor DUDLEY. Was that at Council Bluffs?

The CHAIRMAN. That was at Council Bluffs.

Doctor DUDLEY. I thought it likely, sir.

Mr. ESCH. You know what happened on your line at Harrisburg a few years ago?

Doctor DUDLEY. Yes.

Mr. ESCH. A couple of cars of dynamite were struck by a pasenger train, and they blew up the whole train and killed 23 people.

Doctor DUDLEY. Yes. The question that the chairman asked me was whether in the same train, three or four cars back, they would receive the effect of the explosion. It is impossible to predict what the effect would be.

Mr. MANN. There is no prohibition of carrying these explosives in an express or baggage car?

Mr. DUDLEY. That is, as to samples. It is assumed that the express car and the baggage car are a part of the passenger equipment.

Mr. MANN. Where is the prohibition against carrying them? You call our attention to the fact that the prohibition prevents carrying them in a vessel or vehicle. I might say that the "vehicle" means one vehicle, and does not apply to another vehicle in the same train.

Doctor DUDLEY. I do not know that there is a positive prohibition that the explosive shall not be carried in an express or baggage car; but by implication—yes, if you will allow me [reads]—

That it shall be unlawful to transport, carry, or convey any dynamite, gunpowder, or other explosive between a place in any foreign country and a place within the United States, or a place in any State, Territory, or District of the United States, and a place in any other State, Territory, or District thereof, on any vessel or vehicle of any description operated by a common carrier, which vessel or vehicle is carrying passengers for hire: *Provided*, That it shall be lawful to transport on any such vessel or vehicle small-arms ammunition in any quantity, and such fuses, torpedoes, rockets, or other signal devices as may be essential to promote safety in operation, and properly packed and marked samples of explosives for laboratory examination, not exceeding a net weight of one-half pound each.

Mr. MANN. But explosives in the possession of the passengers are not carried for hire. They are in baggage or express cars. The only prohibition in the bill against carrying in that line is carrying on vessels. There you absolutely prohibit it?

Doctor DUDLEY. Yes, that is right. You would think it advisable, sir, to introduce in the bill a clause preventing the carrying of explosives on a baggage car?

Mr. MANN. I am trying to get advice and information from you at the same time. I was wondering why you made such a difference. Would not those people be affected who would engage in the transportation of explosives on the Lakes?

Doctor DUDLEY. I am not well enough informed to tell you whether the common practice is to carry them on passenger vessels or not. Perhaps Mr. Dwinnell can tell you.

Mr. DWINNELL. We have our own boats.

Mr. MANN. How do the rival companies carry theirs?

Doctor DUDLEY. Usually in smaller boats or freight boats.

Mr. MANN. Nearly all the freight boats carry passengers.

Doctor DUDLEY. I do not think that there is any great amount of explosives carried on vessels on the Great Lakes, unless they are carrying vessels for hire. There are not very many shippers on the Lakes.

I would like to suggest, if you will permit me, Mr. Chairman, in connection with this very question, the necessity for the elasticity provided there, which would permit the railroads, as you say, to attach a carload of dynamite to another car which is carrying passengers. In some States—I think Arkansas is one; doubtless you gentlemen are familiar with it, anyhow—the law provides, or did provide the last time I observed it, that freight trains shall be compelled to carry passengers when they offer themselves at the stations, and if you do not allow the elasticity provided in this bill you will see that the explosives will stop when they come to such a State. The railroads will have no way to get them through.

Mr. TOWNSEND. If you have that provision apply to one road, will it not apply to any road—putting a baggage car on and loading it up with dynamite?

Mr. DWINNELL. The railroads would refuse to do that.

The CHAIRMAN. Gentlemen, do not sections 2 and 3 provide for wonderful elasticity? Section 3 provides—

That it shall be the duty of every common carrier engaged in interstate commerce which transports explosives or other dangerous articles to prescribe regulations for their safe transportation within three months from the date of the passage of this act.

Then section 2 provides—

That it shall be unlawful to transport, carry, or convey dynamite, gunpowder, or other explosive or other dangerous articles between a place in any foreign country and a place within the United States or between a place in one State, Territory, or District of the United States and a place in any other State, Territory, or District thereof, on any vessel or vehicle of any description operated by a common carrier engaged in the business of transportation by land or water, unless the same, when offered for transportation, is in proper condition to transport in accordance with the best known practicable regulations for securing safety in transportation and is packed, marked, loaded, and handled while in transit in accordance with such regulations.

Now we provide for each railway company making regulations. Will it not be said that any regulation made by any railroad in accordance with this provision belongs to that class of regulations that is referred to in section 2 as "the best known practicable regulation for securing safety in transportation?"

Doctor DUDLEY. It would seem so to me, sir.

The CHAIRMAN. Well, then, that remands the whole subject to the varying minds of the authority for each railroad in the United States. They provide their regulations, and then, if your interpretation is correct, any style of packing or marking that is in accordance with the regulations is sufficient, and then it would put upon the Government the burden of showing that there was no regulation made by any railroad company that this particular case of packing did not apply to. Would you ever prosecute or convict a man under a statute of that kind?

Doctor DUDLEY. Our thought was this, that——

Mr. DWINNELL. Our thought was just the opposite of that.

Doctor DUDLEY. Our idea was that under the stimulus of this law the railroads and other transportation companies would immediately provide regulations. The point in mind is this: What regulations shall they be? It was thought possible that it might be extremely difficult to pass a law that would compel all transportation companies to adopt the same regulations, because, if I am right, you will notice in section 3 it says:

It shall be the duty of every common carrier engaged in interstate commerce which transports explosives or other dangerous articles to prescribe regulations.

There are three or four railroad companies in England that do not transport explosives, notwithstanding all the pressure of the Government that has been brought to bear upon them to get them to adopt uniform regulations, and it is believed there is no law to compel them to carry anything that they deem unsafe. If a railroad says, "We deem such and such a thing is unsafe to transport; we do not carry them, and will not make any regulations," what could be done? Now, the question of what regulations shall be devised comes in, and so it was thought that as soon as this law was passed all the railroads would stir this question up, and ask, "What shall be our regulations?"

Now, there is a body of laws that has been enacted through a period of thirty years——

Mr. MANN. Do you say, under section 3, that the railroad companies could amend the regulations?

Doctor DUDLEY. I think so.

Mr. MANN. It provides that in three months they must make regulations, and no authority is given to change them.

Doctor DUDLEY. The authority is given to change them because all the regulations in force may not be in accordance with the best known regulations.

Mr. MANN. Section 3 says that within three months after the act is passed they must make the regulations. There is no authority to change them in that.

Doctor DUDLEY. But it says that the regulations in force shall be the most practicable ones.

Mr. STEVENS. Who decides that?

Doctor DUDLEY. That brings up to a point. Section 7 provides that in the event of a controversy or question arising as to what constitute the best known practicable regulations——

The CHAIRMAN. That is not in this bill.

Mr. SHERMAN. You proposed section 7, but when I introduced this bill I struck that out.

Doctor DUDLEY. Yes. We proposed in section 7 that a board should be appointed consisting of five men, two of whom should be manufacturers, two should represent the transporting interests, and one should be an officer designated by the Secretary of War, the board to decide whether the regulations are the best ones or whether or not they are the proper ones. Mr. Sherman thought that was an unwise provision, in view of the fact that it provided a new board; so he suggested, and we accepted the suggestion, that any question of this kind, instead of being referred to such a board, should be referred to the Interstate Commerce Commission. Will you allow me to read the proposed section 7? [Reads:]

In the event of a controversy or question arising as to what constitutes the best known practicable regulations for securing safety——

Mr. HUBBARD. Does that relate to controversies arising before or after the making of some existing regulation?

Doctor DUDLEY. It relates to controversies arising probably on the part of a shipper who feels himself aggrieved by the enforcement on the part of the railroad company of some regulation.

Mr. HUBBARD. Probably on account of the violation of some existing regulation, so that the question in that case would not come up until after the event, would it?

Doctor DUDLEY. We do not understand it that way, sir. It is supposed that the transportation companies will enforce these regulations. That is the office of the bureau for the safe transportation of explosives and other dangerous articles.

Mr. HUBBARD. In the first place, let me ask you whether these regulations ought to be uniform throughout the whole country?

Doctor DUDLEY. They should, sir, for the reason that the practice should be uniform.

Mr. HUBBARD. Is it not desirable that they should be established by some authority other than themselves?

Doctor DUDLEY. The difficulty of that is the same one that characterizes the present antiquated legislation, namely, that the growth of the knowledge in the matter of explosives is so rapid that new regulations and devices have to be made use of all the while.

Mr. HUBBARD. Would not that authority have power to amend as it received additional light and knowledge?

Doctor DUDLEY. An act of Congress takes a year to get through.

Mr. HUBBARD. I mean general regulations, instead of separate regulations devised by companies, which would naturally differ. I am suggesting that there could be some regulation devised in advance, and the question should not be left to the Commission to determine after the event, to determine whether the regulation was a practical regulation or not.

Doctor DUDLEY. As the matter now stands, there is in existence a code of regulations for the safe transportation of explosives. That code was published and put forth by the American Railroad Association, which is an association of all the railroads in the United States and Canada and Mexico, banded together for the purpose of developing the best methods in railroading. These regulations have been put forth. Now, the association per se does not enforce anything; it recommends; so an organization of the railroads voluntarily is maintained as the bureau for the safe transportation of explosives. That embraces at the present time 93 of our railroads, all of the large ones, representing about 140,000 miles of the 220,000 miles covered by the association. That body has an organization consisting of a chief inspector and 17 subinspectors who are distributed all over the country, carrying out these regulations, enforcing them on the manufacturer where they apply to the manufacturer, and enforcing them on the railroads where they apply to the railroads, the function of the whole thing being to secure safety in transportation.

Now, in order that you may understand the matter, let me give you a single concrete case. An explosion took place at Essex, Ontario, last summer, due, as near as can be found out, to the leaking of dynamite.

Mr. HUBBARD What do you mean by "the leaking of dynamite"?

Doctor DUDLEY. It is this: A cartridge of dynamite is usually 8 inches long and 2 or 2½ inches in diameter. Dynamite is liquid nitroglycerin, absorbed in wood pulp, nitrate of soda, and so forth, the absorbent material being commonly called the "dope." The limit of nitroglycerin allowed is that no dynamite containing more than 60 per cent of nitroglycerin will be received. Now, when this dynamite is made it looks a good deal like brown sugar. It is crumbly-looking stuff and slightly damp. In storage in a damp atmosphere the nitrate of soda absorbs moisture from the air, and this part of your "dope" becomes liquid; the nitrate of soda liquefies from the moisture in the air. Therefore part of the absorbent of that material has disappeared. Moreover, in warm weather nitroglycerin is very much more limpid than in colder weather, and if a lot of it is loaded in a car, as was done at Essex, Ontario, so that the cartridges are standing on end, the liquid trickles down, slowly down and down, and gets out of the box and gets on the floor. As a matter of fact, it is in evidence and well known that in this special case the last time the car was opened before the explosion the conductor and two men went in and found the floor stained with this stuff, and one of the men, after dipping his hand in it and putting the box over on its side, as it should have been placed at first, smeared the face of his companion with it. Then in that shape the dynamite was loaded and started on its way, and the theory is that a pile of the nitroglycerin collected in a semiliquid form and dropped down on the track, and when the wheel went over it it was sufficient to fire the car.

One of the regulations has to do with precautions against leaking dynamite. Another is that the cartridges shall lie flat, and not on their ends. In order to do this we have this bureau of seventeen young men, who are distributed all over the United States, constantly working this matter up and trying to get these regulations enforced.

I am giving you only two of the simple ones. There are a large number of them—precautions that have grown up as a result of experience in this matter. Now, it is believed there will be no difficulty in having these regulations adopted, because otherwise if each railroad sets out for itself it will have a big job.

Mr. ESCH. Is there any cooperation between the railroads and manufacturers of dynamite?

Doctor DUDLEY. The railroads and manufacturers are a unit in this matter. These regulations are submitted to them, and there is a conference committee now in existence consisting of representatives of all the larger manufacturers, some nine of them, who are called upon at any moment by the chief inspector to consult over the regulations before they are changed.

The CHAIRMAN. When you were here before the committee several years ago—I recall you were here several times—on one of these occasions those hearings were suspended, and we were told that the reason why the bill was practically withdrawn from consideration was that you were then in conference with the manufacturers. Now I want to ask if these regulations are the result of those conferences?

Doctor DUDLEY. They are, sir. Mr. McCrea was following the withdrawal of that bill. Mr. McCrea, of the Pennsylvania Railroad; Mr. Marr, of the New York and Western; Mr. Smith, of the New York Central; Mr. Sullivan, of the Missouri Pacific, and myself composed a committee of five to give this subject a careful study and submit to the American Railroad Association a series of regulations. We spent two years nearly over that matter, with about a dozen or twenty meetings, and some two or three days in a meeting. We submitted those regulations to the American Railroad Association. They were adopted by the association with the recommendation that all the railroads issue them and put them in force. We operated a little over a year on that plan, and then it developed that the railroads, some of them, did not enforce the regulations. They had the same regulations, but they would wink at difficulties for the sake of securing traffic. That led to the formation of the bureau for the safe transportation of explosives, whose constitution and by-laws I have here, which embrace, as I have already said two or three times, some 93 roads. Within the last two or three months we have had 10 additions, and it is hoped and expected that within the next year all the railroads of the United States and Canada and Mexico will become members of this bureau.

The CHAIRMAN. Now, Doctor, in view of that fact, is there a necessity of any further legislation than simply to provide that no explosive shall be carried on any passenger car or vessel, except upon the person of the individual in charge of it, and then require that all explosives shall be safely and securely packed and plainly and legibly marked? Would not that, with the moral forces that you are bringing to bear upon the question through this organization, accomplish everything that is needed?

Doctor DUDLEY. It is believed, sir, that this bill, which has been studied and prepared with the utmost care and which is the result of probably at least 10 meetings of the representatives of the bureau with the explosive manufacturers, simply embodies the minimum of legislation that is essential to put us in the place that we ought to be in to secure safety. It is believed that it embodies the minimum. Every point and line here has been talked over with the utmost care by both sides in interest, as you will see, and we have tried to consider the general public, and the bill has been submitted to General Crozier for his criticism, and he approves it. We tried to do everything we could to get this bill just as simple as possible and at the same time to cover the ground which seems to be essential.

Mr. ESCH. Did you call in any official of the War Department in coming to an agreement with respect to these regulations?

Doctor DUDLEY. Yes; the bill was submitted to General Crozier.

Mr. ESCH. I mean the regulations.

Doctor DUDLEY. We have probably the best officer that General Crozier has; at least he said he was, and he did not want to let us have him. But by direction of the President he was detailed for the purpose, namely, Major Dunn. He is the chief inspector of the bureau for the safe transportation of explosives—probably the best-informed explosive man in the United States.

Mr. SHERMAN. Mr. Chairman, it is now within a minute of 12, and we have not by any means exhausted the subject. I understand that the House will not be in session to-morrow, and I therefore ask that the committee now take a recess until 10.30 o'clock to-morrow morning and hear the Doctor again then.

The CHAIRMAN. Without objection, that will be done.

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
HOUSE OF REPRESENTATIVES,
Washington, D. C., Saturday, February 8, 1908.

The committee met this day at 10.30 o'clock a. m., Hon. William P. Hepburn (chairman) presiding.

The CHAIRMAN. Will you proceed, Doctor Dudley?

STATEMENT OF DR. CHARLES B. DUDLEY, OF ALTOONA, PA., CHIEF CHEMIST OF THE PENNSYLVANIA RAILROAD—Concluded.

Doctor DUDLEY. Mr. Chairman and gentlemen, we had reached the point yesterday of considering section 3 of the bill, as to whether it would be advisable to make any modifications, with the idea in mind that section 3 as at present drawn requires every common carrier to prescribe regulations; that possibly that would be ineffective; and it was suggested that a modification should be made to section 3, requiring that the regulations to be issued by the railroad companies be approved either by the Secretary of the Interior, or the Secretary of Commerce and Labor, or the Interstate Commerce Commission, or somebody else that might be chosen.

Now, gentlemen, I would like to say on that point that that matter was very carefully considered when this section was drawn, and there

are two points in connection with this section that seemed to us to have a good deal of weight. As we understand the matter, the ultimate responsibility for events, whatever may happen in the transportation of explosives, is with the transportation companies, and can not be taken off from them. That is the way we understand it. I may be wrong about that. You gentlemen are lawyers, and I am not.

Mr. MANN. Would not that be a case where Congress required you to do a particular thing?

Doctor DUDLEY. Let me make my argument first, and then I will answer. The transportation companies are ultimately responsible for whatever happens. As a corollary to that, it seems that they are the ones nearest to the business and understand the subject best; they are experts, knowing best the things that are necessary to secure safety in transportation, and that therefore they should have the right to make the regulations under which the explosives are transported. If you take that right away from them in any way, you diminish their responsibility, as it seems to me.

One point further. It is not possible, as we understand it, for any aggregation of the railroad or transportation interests of this country to impose upon any individual member its behests. The American Railroad Association does not do anything that is compulsory. It does wholly what it does in a recommendatory manner, leaving the ultimate responsibility for whatever is done on the individual railroad. If the association points out a method that is desirable to avoid either the loss of life or of property and the railroad chooses to ignore that, the association can not compel them to take action. Therefore what we ask you to do, if you will pardon the word, in this section 3 is to make it obligatory upon all common carriers to make some regulations.

Now, then, let us see what points there are that will bring about uniformity, and let us take into consideration the impulse that you put upon them to bring them into uniform regulations.

The CHAIRMAN. Let me ask you, Doctor, is it not true that all of the transportation companies now have regulations in regard to explosives?

Doctor DUDLEY. No, sir; it is not. They do not; no, sir. One of the first steps of the committee of the American Railroad Association was to send to every railroad in the United States and ask what regulations they had with regard to explosives. Many replied, and all of those answers came to me and were codified.

The CHAIRMAN. Have you that document with you?

Doctor DUDLEY. No, sir. I can not tell you how many there were, but many of the companies had no regulations whatever.

Mr. BARTLETT. Is it done now?

Doctor DUDLEY. Since that time there have been tremendous steps forward in this matter.

Mr. SHERMAN. Were any of the roads which had no regulations the larger lines?

Doctor DUDLEY. No; they were the smaller lines. The subject had not come into prominence—that is, the real state of the case had not been fully realized or appreciated. The growth in the explosives business has been something phenominal. In the census year of 1904 the census figures gave us 350,000,000 pounds of explosives made in the United States in that year. Major Dunn's latest figures, based

on the best information he gets from the inspectors, are that during the year 1907 not less than 500,000,000 pounds of explosives were made in the United States, and some estimates place the amount at 700,000,000 during the year. The growth is something phenomenal, and the matter has come into prominence in the last three or four years in a way that it never did before.

Now, then, I want to make clear to you gentlemen what is relied on by those who are trying to handle this matter to bring in recalcitrant railroads, if you choose, and have them adopt uniform regulations. There are two arguments which are very strong as we look at it: First, it has been passed on from mouth to mouth and in conference from one to another and is becoming generally disseminated through the transportation world that some concurrent and agreeing effort must be made by the transportation companies to handle this problem of the safe transportation of explosives in some way to avoid these dreadful accidents. If we do not, it is said that Congress and the States will be compelled, by the force of public sentiment, to take hold of this matter and make legislation whi.h may or may not be drastic, so that one of the strongest impulses toward action is afforded, namely, to protect ourselves no only against losses in the transportation of explosives, but against the interposition of outside influences. The result of that has been to bring the railroads together in this matter in a way they have hardly ever been gotten together before.

But there is still another feature. It is a well-established principle of railroad management that a receiving road that loads a car of freight takes that freight subject to special regulations in regard to that freight, which may be enforced on any other road over which the car must pass before it reaches its destination. Those are called the rules of interchange. A carload of freight is loaded on the Pennsylvania Railroad, if you choose, and comes to a junction point with another railroad, over which it must pass. Now, then, there are certain well defined rules laid down and certain inspections made in regard to that car before it is received by the receiving road. Let us apply this principle, which is a well-known one. To give you a single illustration, I may mention that cars above a certain height are not received by certain roads because those cars will not go through certain tunnels. Also loadings of certain kinds are received only under certain conditions. Let us suppose, for example, the Squedunk Railroad has a manufactory on it and does not issue regulations for the transportation of explosives that are reasonable and practicable. Suppose it loads a car with explosives and that car comes to the junction point with another railroad, and that other railroad is the one that has adopted these best known regulations, if you will allow me to say so. That car would be refused under those conditions and the Squedunk Railroad would find its carload of freight on its hands. That is constantly being done, and has been done; and so we think, if you will allow me to say so, that this section 3 as drawn is about all that can be done by an act of Congress—that is, to require of railroads that they should make regulations—and then we ask you to leave it to us, if you will pardon the seeming presumption, leave it to us to see that they do make regulations that will be the best known practicable regulations.

Mr. BARTLETT. If one railroad did not do that, a railroad with which the Pennsylvania, say, connected—take the Squedunk Railroad, if you please—the only punishment they would receive, or the only punishment inflicted on anybody would be that the man who ordered the explosives would not get them?

Doctor DUDLEY. Yes; but no railroad is putting difficulties in the way of the delivering of freight, sir.

The CHAIRMAN. Suppose those regulations were very lax or nominal. Would not this anxiety to receive freight and receive freight charges induce the Pennsylvania line to accept it as it was?

Doctor DUDLEY. The value of any regulation is not wholly in the wording. It is in the method of execution.

Mr. BARTLETT. That is what I wanted to ask you. Suppose they adopted these regulations and then violated them?

Doctor DUDLEY. The value of the regulations, I say, is partly in what they cover and partly in the way of their execution.

Now, let me give you a few points. Mr. Patterson, general superintendent of transportation of the Pennsylvania Railroad, made a trip last week to New York to be present at the meeting of the bureau for the safe transportation of explosives and other dangerous articles. He regarded the matter of transportation of explosives as of such importance that he took the train to run over to this meeting, and he insisted that we do a great deal more than we are doing now. "I do not care what it costs," he said, "the responsibilities connected with this traffic are so great that we must have the protection that comes from a proper inspection of this business."

Now, sir, answering your question, sir [addressing Mr. Bartlett], I think the regulations, the characteristics that will lead to the enforcement by the railroads of these regulations, are twofold. The first is that at every junction point a railroad is on the watch. Now, the New York Central, through its connections, last summer had an explosion at Essex, Ontario. Fortunately there was little loss of life, but the damages amounted to $50,000, and the Canadian judge mulcted them in a fine of $25,000 for carelessness in handling explosives, that being possible under Canadian law, and he said that if he had the power over the whole thing he would have made that fine five times as much.

The CHAIRMAN. Doctor, suppose your road should receive a carload of miscellaneous freight from another railroad at some junction point. What do they know as to whether there are explosives in that car? It comes locked when they receive it.

Doctor DUDLEY. That is a very good point—the regulations as to shipments from connecting lines. "Cars containing explosives offered by connecting lines not known to have adopted and made due provision for enforcing these regulations will be thoroughly inspected, and if it be found that either the car or its lading is not in the condition required by these regulations, or if the shipments of explosives are not covered by card registers, the car will not be received until the defects are corrected by the line offering it." That is the regulation or proposed regulation No. 107. The car will not be received until the defects are corrected by the line offering it.

The CHAIRMAN. That is language; but as a matter of fact what effect has that?

Doctor DUDLEY. It has a tremendous influence, if you will allow me to say so. Following the Essex explosion in Ontario another car from the same magazine was caught in Buffalo. Now, I want to show you what the situation was in Buffalo. The Lake Shore Railroad would not receive it, because they are a part of the New York Central line, and they said: "We are afraid of that material." The Pennsylvania Railroad, which had brought it to Buffalo from the magazine, would not take it back again, simply because they said: "We have delivered this car to you in good order in accordance with the regulations. We have nothing further to say about it." The switching road on which it was pushed it up on the Lake Shore and pushed it back. The Erie road would not receive it. Major Dunn went up there with his inspectors, opened some of the boxes, got some of the explosive out, had it analyzed in Buffalo, had some of it sent to his own laboratory—about which I will speak in a moment—and finally told Mr. Lomadeaux, the superintendent of the Lake Shore, that he would send one of his inspectors to ride on that particular car to its destination, which he did, stating to Mr. Lomadeaux that the explosive in that car was not in the hazardous condition to transport that the one was in that had exploded at Essex.

I think you will find, gentlemen, as you study this subject more, that the railroads of the country are most thoroughly aroused over this question of safety in the transportation of explosives. It is going to cost our bureau about $150,000 a year. We have established a laboratory at South Amboy and have a chemist there, and are going to put on an assistant chemist. This laboratory has a twofold purpose; first, to examine samples that are being offered for transportation in improper condition before they are loaded——

The CHAIRMAN. Before what?

Doctor DUDLEY. Before they are loaded. For instance, at the magazine the inspector says: "I do not believe that material is safe. This explosive does not look right. The magazine is not in good shape. These boxes are standing. Possibly there are leakages there." A small sample, as provided in the act, is sent to the chemist at South Amboy, and he investigates whether the material is liable to leak in transit and cause an explosion. I say the railroads are thoroughly roused up over this situation. Mr. Smith, the general manager of the New York Central, likewise came to the meeting of the bureau last week and was most emphatic in his statements. I told you yesterday that we had 17 inspectors. The present plan involves 25. It is simply a question of money to get 25. The ultimate plan to cover the United States involves 40 local inspectors, as we call them, men riding around on the railroads, going to the magazines and factories and seeing that the loading is properly done, in accordance with the regulations, and so forth. Mr. Smith said: "I do not care what it costs. We have got to have this protection that comes from the enforcement of these regulations."

Mr. RUSSELL. I want to ask you a question about the regulations. Are you insisting upon this section No. 7 now?

Doctor DUDLEY. If you will allow me just a moment, I would like to take up the relations of the two parts of the bill. We have assumed, gentlemen, that the ordinary criminal features of the bill,

that is, the part that has to do with the fine and imprisonment, if necessary, would be handled by prosecuting attorneys, grand juries, and the courts. We do not see how we could introduce into the bill anything that would supersede those features in the criminal side of the bill. If a man, for instance, is careless in his handling of explosives while in transit; if he puts, for example, a carload of explosives by the side of a pile of ties along the road, and stops it there, and the car takes fire and is burned up through his carelessness, absolutely criminal carelessness, we do not see how we could take the punishment for that out of the hands of the courts.

Mr. BARTLETT. Ordinarily the man would not have money enough to pay any fines—the man who did that?

Doctor DUDLEY. I suppose he would have to go to jail in that case. On the other hand, the other feature of the bill, what we call the arbitration feature, which is embodied in section 7, is for this purpose: Suppose the transporters and manufacturers did not agree. As a matter of fact, at the present moment they are a unit and are working together. They have gone over the details of this bill together. They think it the wisest thing possible, and there is no lack of harmony now. But suppose there should come a time when there should be a lack of harmony, and the question should come up, What are the best practical regulations for the transportation of of explosives? We thought that instead of letting that matter go before the courts, where it would take about a year to get a decision, it might be advisable to have some means by which a quick decision could be reached. I have said already that the ultimate responsibility rests with the transportation companies, and they might arbitrarily say that is final; but in order to provide a fair means of adjusting difficulties of that kind, which at present are handled by consultation—and as long as there is good feeling the consultations will handle it—in order to provide fair means and not seem unduly arbitrary in the matter section 7 was provided. This enables us to get a quick decision. As I stated yesterday, there is a constant change in explosive matters.

Mr. RUSSELL. Have you had any opinion given to you by the legal department on section 7?

Doctor DUDLEY. Yes.

Mr. SHERMAN. On the proposed section 7?

Doctor DUDLEY. Yes.

Mr. SHERMAN. Here is the originally proposed section 7 which I objected to, and then they framed this section 7 to meet my objections.

Mr. RUSSELL. I want to ask you if you have had this question discussed by your legal department with reference to this section 7. You attempt to provide in here that where there is a controversy between the shipper and the carrier as to what is a reasonable and practicable regulation as to the shipment of explosives, when they can not settle the question it is remanded to the Interstate Commerce Commission, and the decision of the Interstate Commerce Commission shall be final until overthrown by the circuit court, and then you give the circuit court jurisdiction. Now, suppose you have that proposition up, and the Interstate Commerce Commission sets out the regulations which it says are the best known practicable regulations, and the carrier complying with those regulations under-

takes to transport the explosives, and en route it explodes and great damage is wrought, and an action for damages is brought. Has your legal department given you any opinion as to whether the defendant, by virtue of the fact that it had adopted the regulations of the Interstate Commerce Commission, would be setting up a good defense in an action of damages?

Doctor DUDLEY. No, sir. We hope to escape the responsibility for an action of damages. After I left here I talked with General Henderson, general solicitor of the Southern Railway, over the case resulting from an explosion of dynamite at Jellico last summer, and——

Mr. RUSSELL. You think you could dispute the proposition that you had adopted the best regulations, notwithstanding the Interstate Commerce Commission had adopted regulations which you did adopt?

Doctor DUDLEY. I would like to say, for the information of the committee, that the last part of that clause, of that original section 7, the one you mention there, was drawn by Mr. Massey, the general counsel of the Pennsylvania Railroad. I was in his own office with him. I had had the matter submitted to him by correspondence first, and had an interview with him later, and he drew the last part of that section. I do not know, Mr. Russell, that I quite grasp what you mean.

Mr. RUSSELL. Here is a proposition to let the Interstate Commerce Commission say in a certain contingency what is the best practicable regulation. Suppose they do prescribe what they say is the best known practicable regulation governing the shipment of explosives: An action for damages is brought; the plaintiff contends that the best known practicable regulation has not been adopted and offers the proof. Now would that section cut him off?

Doctor DUDLEY. I do not think so, sir, and I do not think it was intended that it should. It would be a constant stimulus to the railroads who make these regulations to keep them up to date. Now, for example, I think I see a case where your point would apply. Let us suppose that there are certain precautions taken by the English people, and they have been at this longer than we have. They have been at it since 1871, and we have been at it only about fifteen years, or eighteen or twenty years perhaps. Let us suppose that they have adopted certain precautions that we do not adopt. Now, therefore, a plaintiff would say against the railroad company, "Why, here are precautions that are better than yours." That would be a question for the jury, sir. We would not hope to shirk the responsibility for what we have primarily introduced as our regulations.

The CHAIRMAN. Suppose, under section 6, that a man is indicted, or a company is indicted, for transporting an explosive because it was not in proper condition to transport in accordance with the best known practicable regulations for securing safety. Suppose now you are engaged in the trial of an indictment, what is the effect of section 7 in the event of any controversy or question arising as to what constitutes the best known practicable regulations for insuring safety? That it shall be submitted to the Interstate Commerce Commission. You would stop your trial under that indictment and refer this question under the terms of the law to the Interstate Commerce Commission. It would take it away from the jury.

Doctor DUDLEY. Do you think so?

The CHAIRMAN. Certainly.

Doctor DUDLEY. We would regard this section as purely arbitrational.

The CHAIRMAN. It makes it decisive in any controversies arising. The language is as broad as it can be, "In the event of any controversy or question arising as to what constitutes the best known practicable regulations for securing safety," etc.

Doctor DUDLEY. Would not this be the case—would there not be two issues, namely, here in the case you suppose is a criminal action brought, and in the other case the question at issue is not a criminal action?

Mr. BARTLETT. It is not a criminal action; it is a criminal indictment. The action is to recover money.

Doctor DUDLEY. Well, criminal indictment. In the other case it is a case of what is the best regulation. It has nothing to do with crime in any shape or form. I do not hardly see how we could construe section 7 as having anything to do with the criminal features of the bill.

Mr. RUSSELL. You make the Commission the final arbiter as to what is the best known practicable regulation, and still the finding of the Commission on that point has been set aside by a circuit court?

Doctor DUDLEY. Yes.

Mr. STEVENS. That would only affect the parties to that controversy and nobody else?

Doctor DUDLEY. Yes, so far as we can see; except that all decisions, as I understand them, have their lessons and carry an influence and are usually made use of.

Mr. STEVENS. It would be used in any other case?

Doctor DUDLEY. If the Supreme Court decides something, it becomes part of the law of the land and everybody guides himself accordingly, so that if a decision was reached by the Interstate Commerce Commission on the point submitted it would become well known and become part of the regulations and affect everybody whose interests are involved.

Mr. STEVENS. It would not bind me.

Doctor DUDLEY. So far as deciding the question as to what are the best known practicable regulations for the transportation of explosives in all previous legislation that we have known anything about, the act itself has attempted to cover the regulations. The English explosive act, passed in 1871, is a small book. To be perfectly frank with you, it is a book about as long and about as wide as that [indicating a book] and half as thick. It goes into a great many details. It classifies explosives. It gives a great many characteristics. It does not especially give regulations for transportation, but endows the chief inspector with power to promulgate or help to get regulations made for the transportation of explosives, recognizing the necessity for possible change, due to the growth of knowledge. The secretary of state for home affairs is entitled to issue orders in council, modifying almost anything in the act, except the prime principles proposed, and the bundle of decisions already rendered in regard to that act and the orders in council are almost as big as the act itself.

Now, our idea was this: We must have something flexible, and something that will meet changing conditions from time to time. If

any particular feature gets tied up in an act of Congress, it would take a long time to change it. Legislation that was applicable forty years ago is no longer applicable, although it is still on the statute books.

Mr. ESCH. Would that apply to the invention of an entirely new explosive, for instance, which in the handling could not be handled by your existing rules and regulations? You would have to suddenly change all your rules and regulations to transport it?

Doctor DUDLEY. Yes; and there is a proviso in the regulations of the bureau; one item in the constitution of the association is that no new explosive shall be received for transportation until it has been examined and tested and approved by the chief inspector. We have made that condition, you see, in our practical carrying out of things.

Mr. ESCH. Do your rules provide that if I discover a new explosive, I can not tender it to a common carrier and have it carried until it is examined by this particular bureau, which is entirely outside the law?

Doctor DUDLEY. Yes. Under the laws, as we understand them, every railroad is entitled to reject any freight and refuse to transport it if it is regarded as too hazardous to transport. That is the rule of every railroad that I know of. Under the laws regulating common carriers we are compelled to transport freight received, but we are not required to receive everything. The breweries in Pennsylvania, for example, dry the brewers' grains. The grains are shipped abroad in shiploads. The old method was to feed the grains to cattle. Now, methods have been devised of drying those brewers' grains and shipping them to Europe. We had seven fires within two weeks, produced by spontaneous combustion in transit. I was sent over to the distilleries or breweries to see what the trouble was, and I found that the difficulty was that the grains were not completely dried out; the drying apparatus was not thoroughly efficient. I had a barrel of the dried grains sent to Altoona, and I put a large quantity of it in an insulated vessel and put moisture into the vessel, and found that the incubation period by which heat would be generated to a dangerous point was four days. My point is this, that every railroad company is absolutely entitled to reject and refuse to receive material that will cause loss in transit. This whole matter is referred now to the bureau for the safe transportation of explosives and other dangerous articles. Formerly, so far as the Pennsylvania Railroad was concerned, it was all referred to me. I am the chemist, you know, of the Pennsylvania Railroad. We made many investigations of spontaneous combustion, and our only remedy is to reject and refuse to receive goods offered until we get the proper information thereon.

Mr. MANN. Doctor, would it bother you to come back to the proposed section No. 7?

Doctor DUDLEY. No, sir.

Mr. MANN. What do you mean when you say, "In the event of any controversy arising as to what constitutes the best known practicable regulations?" What do you mean by "controversy?"

Doctor DUDLEY. Any controversy between the shipper and the transporter. I will give you a case——

Mr. MANN. Suppose a shipper offers goods to the railroad company, and there is a controversy there. That particular case is to be referred to the Interstate Commerce Commission?

Doctor DUDLEY. That is right.

Mr. MANN. And they will probably have to wait for a year before the Interstate Commerce Commission could act?

Doctor DUDLEY. We would hope to get action at once.

Mr. MANN. You have great hope.

Doctor DUDLEY. Yes.

Mr. MANN. Would that decision bind future shipments?

Doctor DUDLEY. Yes.

Mr. MANN. Do you mean to say that somebody not a party to the controversy would be bound by that?

Doctor DUDLEY. Yes; by that decision. That is, the railroad company would compel him to go through the same detail. That would be the position we would take. We would say, "Gentlemen, this matter is decided. It has been adjudicated by the Interstate Commerce Commisison, and decided so and so." So that we would have absolutely the protection we need.

Mr. MANN. Here is the point I was getting at: You then provide that after the Interstate Commerce Commission makes a ruling, that stands until reversed or set aside or modified by the circuit court, and it may confer upon the circuit court the power to modify those rules and regulations. Did your legal department tell you that the courts had the power to modify rules and regulations in reference to the shipment of freight?

Doctor DUDLEY. We think so. The internal regulations of a railroad are not the law of the land, necessarily; but we think the courts would be inclined to uphold them.

Mr. MANN. In advance of a suit?

Doctor DUDLEY. No.

Mr. MANN. The proposition I put to you is in advance of a suit.

Doctor DUDLEY. I do not understand you. I do not see how there can be any question until there is a suit brought.

Mr. MANN. Suppose a man brings a carload of explosives to the Pennsylvania Railroad for shipment. You say he is obliged to do certain things, and he says he is not obliged to do them. Is he then to bring suit against the Pennsylvania Railroad?

Doctor DUDLEY. Yes.

Mr. MANN. This says, "In the event of a controversy arising." Nothing is said about suits being brought.

Doctor DUDLEY. The subject is to be referred for decision to the Interstate Commerce Commission.

Mr. MANN. Is the suit to be brought first?

Doctor DUDLEY. I did not understand you. We provided in the original section that the board which shall be constituted shall——

Mr. MANN. That original section has nothing to do with this.

Doctor DUDLEY. Yes; but allow me just one second. The point I wanted to make was this: The parties interested, who feel themselves aggrieved, appeal to the Interstate Commerce Commission. That is the procedure as we understand it.

Mr. MANN. That is before the suit is brought in court?

Doctor DUDLEY. Oh, yes. The suit is final, the last thing.

Mr. MANN. You mean a petition in the Interstate Commerce Commission, not a suit in court? Do you make a distinction between a suit in court and a petition before the Interstate Commerce Commission?

Doctor DUDLEY. I think there is a misunderstanding between us. We do not grasp each other's meaning. See if I can make it clear to you. We suppose that the transportation companies think it essential that every package of black powder, for example, shall be done up with a muslin bag around it, so as to prevent explosion. That is the universal practice in Europe, not in this country. Now, let us assume that the transportation companies, or the American Railroad Association, puts that into its regulations. Now, then, the manufacturers say, "We can not stand that. That is going to increase the cost. We do not believe it is necessary, and we do not want to do that thing. We do not want to put a muslin bag inside the metal keg to be shipped to the miners." That is commonly known as the double package, technically. Now, the manufacturing company says, "That is not necessary." Therefore there is a controversy. The transportation companies have said that is the best known practicable means for preventing danger or securing safety in transportation. The manufacturers say, "We can not stand it, and we do not think it is necessary." Now, then, the manufacturers under these circumstances appeal to the Interstate Commerce Commission for a quick decision, and in that decision one party or the other to the controversy is sustained, according to the evidence produced. Now, after the decision is reached—let us assume that the decision is against the transportation companies—the transportation companies say, "We are not satisfied with that decision, and we will appeal to the circuit court," and the record of the case before the Interstate Commerce Commission becomes a part of the case, to go before the court.

Now, I would like to say that that feature of providing an appeal was added for the sake of, and in accordance with, the discussion in Congress last year over the rate bill; the question whether the railroads could appeal from the Interstate Commerce Commission to the courts was, as you know, very much talked about, and so we thought it would be unfair to get a quick decision that was not subject to revision. Now, to my mind the whole thing is perfectly clear——

Mr. MANN. I think it has never been claimed that the court had the power to do anything except decide whether the rules fixed by the Interstate Commerce Commission were reasonable rules. They can not say what the rate shall be. They can not determine what the regulations shall be.

Doctor DUDLEY. They could approve of the findings of the Interstate Commerce Commission in any case, or could set them aside.

Mr. STEVENS. They could set them aside in a judicial case, but this is an administrative work. This is a work of executive authority, not of judicial authority.

Mr. MANN. And not only that, but you give them the power to make new regulations, which is clearly unconstitutional. I think the constitutionality of it goes to the whole form that you have here. It would make the whole law unconstitutional.

Mr. STEVENS. I think so, too. It is an administrative function that they are trying to confer upon the courts.

Mr. MANN. They are trying a case in advance of a suit in court. If the man who offered the powder commenced a proceeding in court to compel you to take it, or sued you for damages for refusing to take it, the court would have to determine what is a reasonable regulation. But this is merely a moot case.

Doctor DUDLEY. As I have explained the procedure, I do not quite see the point you make.

Mr. MANN. I think that is the reason why Mr. Russell probably asked you if this was a matter that had passed through the hands of the counsel of the company.

Mr. BARTLETT. Would it not be true that whether the requirements were the best known or not was purely a question of fact, and not a question of construction of law? It was not a construction of law, but a question of fact?

Doctor DUDLEY. Yes; a fact proved by witnesses.

Mr. MANN. Before a suit was brought?

Mr. BARTLETT. You will find they will not take any jurisdiction of it, if it ever is sent to them.

Doctor DUDLEY. I would like to say again that that general section and the bill itself was passed upon by Mr. Massey, the general solicitor of the Pennsylvania Railroad. Of course I am not a lawyer to follow you in this matter, and I do not quite see how the court is called upon to make any decision before a suit is brought.

Mr. STEVENS. It would not make any decision.

Doctor DUDLEY. Yet I understand that Mr. Mann makes that point.

Mr. BARTLETT. The Supreme Court would throw you out.

Doctor DUDLEY. The case would be brought, and brought first by the so-called injured party, before the Interstate Commerce Commission.

Mr. MANN. I see what your point is. It seems to me, though, that a petition of a party to ask a United States circuit court to determine what are the best known practicable regulations for transporting explosives is not a suit, within the meaning of the law.

Doctor DUDLEY. How about patents? The most complicated and difficult things are brought before the courts, and it is a question of expert testimony.

Mr. MANN. We could not confer upon the courts the power to determine whether a man's patent was valid or not. The court would not determine the question, and the court never attempts to until there is a controversy between two different persons of adverse interests.

Doctor DUDLEY. That is exactly what we have in mind here—a suit between the manufacturer and the transportation company.

Mr. MANN Do you know how many manufacturers of high explosives there are that would be affected by this bill?

Doctor DUDLEY. I can not tell you the total number of high-explosive manufacturers, but we know that there are now in existence, with the possibility that we have not gotten the whole of them, 147 manufacturers of explosives. I can not give you the details.

Mr. MANN. They would be affected by this legislation?

Doctor DUDLEY. Yes; and there are 17 fireworks manufacturers.

Mr. MANN. Where are they located, generally?

Doctor DUDLEY. There is one on the Ann Arbor Railroad, one on the Arkansas Central, two on the Atchison, Topeka and Santa Fe, and——

Mr. SHERMAN. What States? That is what we want.

Doctor DUDLEY. The principal portions of them are in Pennsylvania and New Jersey, generally.

Mr. SHERMAN. Have you a table there?
Doctor DUDLEY. Yes.
Mr. SHERMAN. Will you leave it with the stenographer?
Doctor DUDLEY. With pleasure.
(Following is the document referred to:)

[Printed for use of members of the association only.]

THE AMERICAN RAILWAY ASSOCIATION.

List of manufacturers of explosives.

[Compiled by the Bureau of Explosives, January 1, 1908. * Lines not members of the Bureau of Explosives.]

*Ann Arbor Railroad: Great Western Powder Company, Toledo, Ohio.

*Arkansas Central Railway: Equitable Powder Manufacturing Company, Fort Smith, Ark.

*Atchison, Topeka and Santa Fe Railway: Pennsylvania and Kansas Plant (Du Pont), Pittsburg, Kans.; Trojan Safety Powder Company, Overton, Colo.

Atchison, Topeka and Santa Fe Railway (coast lines): Giant Powder Company (Consolidated), Giant, Cal.; Hercules Plant (Du Pont), Hercules, Cal.; Vigorite Plant (Du Pont), Vigorite, Cal.

Atlantic Coast Line Railroad: Romaine & Co. (fireworks), Petersburg, Va.

*Baltimore and Ohio Railroad: American High Explosives Company, New Castle, Pa.; Austin Powder Company, Brooklyn, Ohio; Burton Powder Company, Hillsville, Pa.; Columbia Firecracker Company, Fostoria, Ohio; Fairchance Plant (Du Pont), Fairchance, Pa.; Kellog Plant (Du Pont), Central City, W. Va.; Meadow Brook Plant (Du Pont), Meadow Brook, W. Va.; Pittsburg Fulmenite Company, Zelienople, Pa.; Rand Powder Company, Rand, Pa.; Rockdale Powder Company, Hoffmansville, Md.; Youngstown Plant (Du Pont), Youngstown, Ohio.

Bangor and Aroostook Railroad.

*Bay of Quinte Railway: Ontario Powder Company, Tweed, Ontario.

*Beaumont, Sour Lake and Western Railway: Texas Dynamite Company, Beaumont, Tex.

Bessemer and Lake Erie Railroad.

Boston and Maine Railroad: American Powder Mills, Maynard, Mass.; American Smokeless Powder Company, South Acton, Mass.; Royal Block Powder Company, Gorham, Me.; Schaghticoke Plant (Du Pont), Schaghticoke, N. Y.

*Buffalo and Susquehanna Railroad: Sinnemahoning Powder Manufacturing Company, Sinnemahoning, Pa.

Buffalo Creek Railroad.

Buffalo, Rochester and Pittsburg Railway: American High Explosives Company, New Castle, Pa.; Riker Plant (Du Pont), Punxsutawney, Pa.; Rochester Fireworks Company, Rochester, N. Y.

*Canadian Pacific Railway: General Explosives Company (Canada), Hull, Quebec; Giant Powder Company, Telegraph Bay, British Columbia; Hamilton Powder Company, Departure Bay, British Columbia; Hamilton Powder Company, Northfield, British Columbia; Hamilton Powder Company, Windsor Mills, Quebec; Hand Fireworks Company, Hamilton, Ontario; J. C. Mitchell Smokeless Powder Company, Medicine Hat, Alta.; Ontario Powder Company, Tweed, Ontario; Standard Explosive Company, Vaudreuil, Quebec.

*Central New England Railway: Ensign & Bickford Company, Simsbury, Conn.

Central of Georgia Railway: Jefferson Powder Company, Birmingham, Ala.; Sterling Plant (Du Pont), Birmingham, Ala.

Central Railroad of New Jersey: Detwiller & Street Fireworks Company, Jersey City, N. J.; Enterprise Plant (high explosives) (Du Pont), Nesquehoning, Pa.; Enterprise Plant (black powder) (Du Pont), Penobscot, Pa.; Forcite Plant (Du Pont), Hopatcong, N. J.; General Explosives Company, Lake Junction, N. J.; Gracedale Plant (Du Pont), Gracedale, Pa.; Kenvil Plant (Du Pont), Kenvil, N. J.; Mauch Chunk Plant (Du Pont), Mauch Chunk, Pa.; Miller, J. S. (black powder), White Haven, Pa.; Miller, J. S. Powder Company (dynamite), White Haven, Pa.; Moosic Plant (black powder) (Du Pont), Moosic, Pa.; Oliver Plant (Du Pont), Laurel Run, Pa.; Picatinny Arsenal, Dover, N. J.; Star Electric Fuze Company, Wilkesbarre, Pa.

Central Vermont Railway Company: Robin Hood Ammunition Company, Swanton, Vt.

Chesapeake and Ohio Railway: Kellog Plant (black powder) (Du Pont), Central City, W. Va.

*Chicago and Alton Railroad: Equitable Powder Manufacturing Company, East Alton, Ill.

Chicago and Eastern Illinois Railroad: Ætna Powder Company (Western), Thebes, Ill.; Egyptian Powder Company, Marion, Ill.; Miami Powder Company, Fayville, Ill.

Chicago and North Western Railway: Pleasant Prairie Plant (Du Pont), Pleasant Prairie, Wis.

Chicago and Western Indiana Railroad.

Chicago, Burlington and Quincy Railroad: Ashburn Plant (Du Pont), Ashburn, Mo.; Buckeye Powder Company, Edwards, Ill.; Equitable Powder Manufacturing Company, East Alton, Ill.; Mooar Plant (Du Pont), Mooar, Iowa.

Chicago, Indianapolis and Louisville Railway: United States Powder Company, Linton, Ind.

*Chicago, Peoria and St. Louis Railway: Illinois Powder Manufacturing Company, Grafton, Ill.

Chicago, Rock Island and Gulf Railway.

Chicago, Rock Island and Pacific Railway: Trojan Safety Powder Company, Overton, Colo.; Patterson Plant (Du Pont), Patterson, Okla.

Chicago, St. Paul, Minneapoils and Omaha Railway: Barksdale Plant (Du Pont), Barksdale, Wis.

Cincinnati and Muskingum Valley Railroad.

Cincinnati, Blufiton and Chicago Railroad.

*Cincinnati, Hamilton and Dayton Railway: Ætna Powder Company (fuze), Xenia, Ohio; A. L. Due Fireworks Company, Lockland, Ohio; Great Western Powder Company, Toledo, Ohio; Miami Powder Company, Goes Station, Ohio.

Cincinnati, New Orleans and Texas Pacific Railway: Sterling Plant (Du Pont), Lewisburg, Ala.

Cincinnati Northern Railroad.

Cleveland, Akron and Columbus Railway.

Cleveland, Cincinnati, Chicago and Saint Louis Railway (Big "4"): Berea Novelty Company, Berea, Ohio; Consolidated Fireworks Company, Reading, Ohio; Crescent Novelty Company, Berea, Ohio; Del Grande Fireworks Company, Paris, Ill.; E. Hebenstreet (fireworks), Lockland, Ohio; Equitable Powder Manufacturing Company, East Alton, Ill.; Fontanet Plant (Du Pont), Fontanet, Ind.; Great Western Powder Company, Toledo, Ohio; H. P. Diehl Fireworks Company, Lawrenceburg, Ind.; A. L. Due Fireworks Company, Lockland, Ohio.

Coal and Coke Railway.

*Colorado and Southern Railway: Trojan Safety Powder Company, Overton, Colo.

*Copper Range Railroad: Hancock Chemical Company, Dollar Bay, Mich.

Cumberland Valley Railroad.

Delaware and Eastern Railroad.

Delaware and Hudson Company: Consumers' Plant (Du Pont), Peckville, Pa.; Kline-Buss Smokeless Explosive Company, Rocky Glen, Pa.; Moosic Plant (Du Pont), Moosic, Pa.; Rushdale Plant (Du Pont), Jermyn, Pa.; Star Electric Fuze Company, Wilkes-Barre, Pa.

*Delaware, Lackawanna and Western Railroad: Consumers' Plant (Du Pont), Peckville, Pa.; Forcite Plant (Du Pont), Hopatcong, N. J.; General Explosives Company, Lake Junction, N. J.; Picatinny Arsenal, Dover, N. J.

*Denver and Rio Grande Railroad: Trojan Safety Powder Company, Overton, Colo.

Detroit and Mackinac Railway: Ajax Powder Company, Bay City, Mich.

Detroit and Toledo Shore Line Railroad: Great Western Powder Company, Toledo, Ohio.

*Detroit, Toledo and Milwaukee Railroad: Great Western Powder Company, Toledo, Ohio,

*Duluth, South Shore and Atlantic Railway: Marquette Plant (Du Pont), Marquette, Mich.

Eastern Railway of New Mexico.

El Paso and Southwestern System.

Erie Railroad: Austin Cartridge Company, Falls Junction, Ohio; Austin Powder Company, Falls Junction, Ohio; Electric Device Company, Sharon, Pa.; Haskell Plant (Du Pont), Haskell, N. J.; Kline-Buss Smokeless Explosive Company, Rocky Glen, Pa.; Macbeth Fuse Works, Pompton Lake, N. J.; Masurite Explosive Company, Masury, Ohio; Metallic Cap Manufacturing Company, Pompton Lake, N. J.; Moosic Plant (Du Pont), Moosic, Pa.; Oakland Plant (Du Pont), Oakland, N. J.; Rochester Fireworks Company, Rochester, N. Y.; Wayne Plant (Du Pont), Wayne, N. J.; Youngstown Plant (Du Pont), Youngstown, Ohio.

Erie and Michigan Railway.

*Esquimalt and Nanaimo Railway: Hamilton Powder Company, Departure Bay, British Columbia; Hamilton Powder Company, Northfield, British Columbia.

Evansville and Terre Haute Railroad.

*Fort Smith and Western Railroad: Equitable Powder Manufacturing Company, Fort Smith, Ark.

Georgia and Florida Railway.

Georgia Coast and Piedmont Railroad.

Grand Rapids and Indiana Railway.

Grand Trunk Railway System: Ajax Dynamite Company, Bay City, Mich.; General Explosives Company of Canada, Hull, Quebec; Hamilton Powder Company, Belœil, Quebec; Hamilton Powder Company, Windsor Mills, Quebec; Hand Fireworks Company, Hamilton, Ontario; Robin Hood Ammunition Company, Swanton, Vt.; Standard Explosives Company, Vaudreuil, Quebec.

*Great Northern Railway: Maury Powder Company, Maury Island, Wash.; Ran danite Powder Company, Mukliteo, Wash.

Gulf, Colorado and Santa Fe Railway: Texas Dynamite Company, Beaumont, Tex.

Hocking Valley Railway: Columbia Firecracker Company, Fostoria, Ohio; Great Western Powder Company, Toledo, Ohio.

Illinois Central Railroad: Ætna Powder Company, Thebes, Ill.; Belleville Plant (Du Pont), Belleville, Ill.; Egyptian Powder Company, Marion, Ill.; Majestic Powder Company, Greenup, Ill.; Miami Powder Company, Thebes, Ill.; Sycamore Plant (Du Pont), Ashland City, Tenn.

Indianapolis Southern Railroad (Illinois Central): United States Powder Company, Linton, Ind.

*Intercolonial Railway of Canada: Acadia Powder Company, Waverly, Nova Scotia.

Jamestown, Chautauqua and Lake Erie Railroad.

*Kansas City Southern Railway: Equitable Powder Manufacturing Company, Fort Smith, Ark.; Joplin Plant (Du Pont), Cagle Station, Mo.; Pennsylvania and Kansas Plant (Du Pont), Pittsburg, Kans.; Texas Dynamite Company, Beaumont, Tex.

Kansas Southwestern Railway.

Lake Erie and Western Railroad: Columbia Firecracker Company, Fostoria, Ohio.

Lake Shore and Michigan Southern Railway: American Dynalite Company, Amherst, Ohio; Austin Powder Company, Brooklyn, Ohio; Berea Novelty Company, Berea, Ohio; Crescent Novelty Company, Berea, Ohio; Electric Device Company, Sharon, Pa.; Great Western Powder Company, Toledo, Ohio; Masurite Explosive Company, Masury, Ohio; Youngstown Plant (Du Pont), Youngstown, Ohio.

*Lackawanna and Wyoming Valley Railroad: All American Powder Company, South Avoca, Pa.; Kline-Buss Smokeless Explosive Company, Rocky Glen, Pa.; Moosic Plant (Du Pont), Moosic, Pa.

Lehigh and New England Railroad.

Lehigh Valley Railroad: Cressona Powder Company, Cressona, Pa.; D. C. Rand Powder Company, Pittsford, N. Y.; Enterprise Plant (Du Pont), Penobscot, Pa.; Gracedale Plant (Du Pont), Gracedale, Pa.; J. S. Miller (Black Powder), White Haven Pa.; J. S. Miller Powder Company (dynamite), White Haven, Pa.; Lofty Powder Company, Lofty, Pa.; Nuremberg Powder Company, Tomhicken, Pa.; Oliver Plant (Du Pont), Laurel Run, Pa.; Rochester Fireworks Company, Rochester, N. Y.; Star Electric Fuze Company, Wilkesbarre, Pa.

*Long Island Railroad: Pains Fireworks, Parkville, L. I.

Louisville and Nashville Railroad: Belleville Plant (Du Pont), Belleville, Ill.; Connable Plant (Du Pont), Birmingham, Ala.; Jefferson Powder Company, Birmingham, Ala.; Rand Powder Company, Dossett, Tenn.; Sterling Plant (Du Pont), Lewisburg, Ala.; Tennessee Powder Company, Jellico, Tenn.

Louisville, Henderson and St. Louis Railroad.

*Maine Central Railroad: Royal Block Powder Company, Gorham, Me.

*Marquette and Southeastern Railway: Marquette Plant (Du Pont), Marquette, Mich.

*Mary Lee Railroad: Connable Plant (Du Pont), Birmingham, Ala.; Sterling Plant (Du Pont), Lewisburg, Ala.

*Mexican Central Railway: National Dynamite Company of Mexico, Dinamita, Durango.

Michigan Central Railroad: Ajax Dynamite Company, Bay City, Mich.; Great Western Powder Company, Toledo, Ohio.

*Midland Valley Railroad: Equitable Powder Company, Fort Smith, Ark.

*Mineral Range Railroad: Hancock Chemical Company, Dollar Bay, Mich.

Missouri, Kansas and Texas Railway: Joplin Plant (Du Pont), Cagle Station, Mo.; Patterson Plant (Du Pont), Patterson, Okla.

Missouri Pacific Railway: Egyptian Powder Company, Marion, Ill.; Independent Powder Company, Carthage, Mo.; Joplin Plant (Du Pont), Cagle Station, Mo.; Pennsylvania and Kansas Plant (Du Pont), Pittsburg, Kans.; Trojan Safety Powder Company, Overton, Colo.

Muscatine North and South Railway.

* National Railroad of Mexico: National Dynamite Company of Mexico, Dinamita, Durango.

New Orleans and Northeastern Railroad.

New York and Ottawa Railway.

New York Central and Hudson River Railroad: D. C. Rand Powder Company (black powder), Pittsford, N. Y.; Nitro Powder Company, Port Ewen, N. Y.; Rochester Fireworks Company, Rochester, N. Y.; Rosendale Plant (Du Pont), Rosendale, N. Y.; United States Naval Station, Iona Island, N. Y.

* New York, Chicago and St. Louis Railroad: Columbia Firecracker Company, Fostoria, Ohio.

* New York, New Haven and Hartford Railroad: American Powder Mills, Maynard, Mass.; American Smokeless Powder Company, Maynard, Mass.; Ensign & Bickford Company, Simsbury, Conn.; Hazardville Plant (Du Pont), Hazardville, Conn.

New York, Ontario and Western Railway: Consumers Plant (Du Pont), Peckville, Pa.; Nitro Powder Company, Kingston, N. Y.; Rushdale Plant (Du Pont), Jermyn, Pa.

New York, Philadelphia and Norfolk Railroad.

Norfolk and Southern Railroad.

Norfolk and Western Railway: Nemours Plant (Du Pont), Nemours, W. Va.; Romaine & Co. (fireworks), Petersburg, Va.

* Northern Pacific Railway: Maury Powder Company, Maury Island, Wash.

Oregon Railroad and Navigation Company.

Oregon Short Line Railroad.

Pennsylvania Railroad: Carneys Point Plant (Du Pont), Carneys Point, N. J.; Eastern Dynamite Company, Emporium, Pa.; Electric Device Company, Sharon, Pa.; Emporium Plant (Du Pont), Emporium, Pa.; Emporium Powder Manufacturing Company, Emporium, Pa.; Fairchance Plant (Du Pont), Fairchance, Pa.; Frankford Arsenal, Frankford, Pa.; Joseph Scalina (fireworks), New Naples, N. J.; Keystone Powder Manufacturing Company, Emporium Pa.; McAbee Powder and Oil Company, Tunnelton, Pa.; Nuremburg Powder Company, Tomhicken, Pa.; Repauno Plant (Du Pont), Gibbstown, N. J.; Riker Plant (Du Pont) (shut down), Punxsutawney, Pa.; Rochester Fireworks Company, Rochester, N. Y.; Rockdale Powder Company, Hoffmannsville, Md.; Royal High Explosives Company, York, Pa.; Shamokin Powder Company, Shamokin, Pa.; Sinnemahoning Powder Company, Sinnemahoning, Pa.; Standard Powder Company, Horrell Station, Pa.; Star Electric Fuze Company, Wilkes-Barre, Pa.; Wapwollopen Plant (Du Pont), Wapwollopen, Pa.

Pennsylvania Lines (West): Ætna Powder Company (fuse), Xenia, Ohio; A. L. Due Fireworks Company, Lockland, Ohio; American High Explosives Company, Coverts Station, Pa.; Austin Powder Company, Brooklyn, Ohio; Burton Powder Company, Coverts Station, Pa.; Great Western Powder Company, Toledo, Ohio; Hartford City Plant (high explosives) (Du Pont), Hartford City, Ind.; King Powder Company, Kings Mills, Ohio; Masurite Explosive Company, Masury, Ohio; Miami Powder Company, Goes, Ohio; Senior Powder Company, Morrow, Ohio; Youngstown Plant (Du Pont), Youngstown, Ohio.

Peoria and Eastern Railway.

* Pere Marquette System: Ajax Dynamite Company, Bay City, Mich.; Great Western Powder Company, Toledo, Ohio.

Philadelphia and Reading Railway: Allentown Non-Freezing Company, Jordan Bridge, Pa.; Black Diamond Powder Company, Haucks Station, Pa.; Brandywine Plant (Du Pont), Montchanin, Del.; Carneys Point Plant (Du Pont), Carneys Point, N. J.; Connell Powder Company, Trevorton, Pa.; Cressona Powder Company, Cressona, Pa.; Economy Powder Company, Wyomissing, Pa.; Experimental Station (Du Pont), Newbridge, Del.; Ferndale Plant (Du Pont), Ringtown, Pa.; Frankford Arsenal, Frankford, Pa.; Lakeside Powder Company, East Mahanoy Junction, Pa.; Locust Mountain Powder and Dynamite Company, Krebs Station, Pa.; Lofty Powder Company, Lofty, Pa.; Pennsylvania Powder, Dynamite and Fuse Company, Brandonville, Pa.; Potts Powder Company, Reynolds, Pa.; Repauno Plant (Du Pont), Gibbstown, N. J.; Roberts Powder Company, Krebs, Pa.; Shamokin Powder Company, Shamokin, Pa.; Shenandoah Plant (Du Pont), Krebs Station, Pa.; Tamaqua Plant (Du Pont), Tamaqua, Pa.

Pittsburg and Lake Erie Railroad: American High Explosives Company, New Castle, Pa.; Burton Powder Company, Quaker Falls, Pa.; Youngstown Plant (Du Pont), Youngstown, Ohio.

Pittsburg, Lisbon and Western Railroad.

Raleigh and Charleston Railroad.

*Raritan River Railroad: Parlin Plant (Du Pont), Parlin, N. J.
Rutland Railroad.
*St. Johnsbury and Lake Champlain Railroad: Robin Hood Ammunition Company, Swanton, Vt.
St. Joseph and Grand Island Railway.
St. Louis and San Francisco Railroad: Columbus Plant (Du Pont), Turck, Kans.; Equitable Powder Manufacturing Company, Fort Smith, Ark.; Excelsior Powder Manufacturing Company, Holmes Park, Mo.; Jefferson Powder Company, Birmingham, Ala.; Joplin Plant (Du Pont), Cagle Station, Mo.; Pennsylvania and Kansas Plant (Du Pont), Pittsburg, Kans.; Sterling Plant (Du Pont), Lewisburg, Ala.
St. Louis, Brownsville and Mexico Railway.
St. Louis, Iron Mountain and Southern Railway (Missouri Pacific Railway): Ætna Powder Company, Thebes, Ill.; Equitable Powder Manufacturing Company, Fort Smith, Ark.; Miami Powder Company, Thebes, Ill.
St. Louis Southwestern Railway System: Ætna Powder Company (Western), Thebes, Ill.; Miami Powder Company, Thebes, Ill.
San Antonio and Aransas Pass Railway.
Seaboard Air Line Railway: Jefferson Powder Company, Birmingham, Ala.; Romaine & Co. (fireworks), Petersburg, Va.; Sterling Plant (explosives) (Du Pont), East Birmingham, Ala.
Southern Railway: Belleville Plant (Du Pont), Belleville, Ill.; Chattanooga Plant (Du Pont), Ooltewah, Tenn.; Jefferson Powder Company, Sayreton, Ala.; Rand Powder Company, Dossetts Station, Tenn.; Sterling Plant (Du Pont), Lewisburg, Ala.; Tennessee Powder Company, Jellico, Tenn.
Southern Indiana Railway: United States Powder Company, Coalmont, Ind.
Southern Pacific Company: Benicia Arsenal, Benicia, Cal.; California Cap Company, Stege, Cal.; Coast Manufacturing and Supply Company, Melrose, Cal.; Giant Powder Company (consolidated), Clipper Gap, Cal.; Giant Powder Company (consolidated), Giant, Cal.; Hercules Plant (Du Pont), Hercules, Cal.; Pacific High Explosive Company, Roberts Station, Cal.; Santa Cruz Plant (Du Pont), Santa Cruz, Cal.; Selby Shell Works, Selby, Cal.; Texas Dynamite Company, Beaumont, Tex.; United Powder Company, San Jose, Cal.; Vigorite Plant (Du Pont), Vigorite, Cal.
*Staten Island Rapid Transit Railway Company: Consolidated Fireworks Company, Port Richmond, N. Y.; Nordlinger-Charlton Fireworks Company, Port Richmond, N. Y.; Thomas Lloyd (fireworks), Dongan Hills, N. Y.
Sunset Central Lines.
Tacoma Eastern Railway.
Terminal Railroad Association of St. Louis.
*Toledo and Western Railroad: Great Western Powder Company, Toledo, Ohio.
*Toledo, St. Louis and Western Railroad: Great Western Powder Company, Toledo, Ohio.
Toronto, Hamilton and Buffalo Railway: Hand Fireworks Company, Hamilton, Ontario.
Trinity and Brazos Valley Railway.
Union Pacific Railroad.
Vandalia Railroad: Del Grande Fireworks Company, Paris, Ill.; Majestic Powder Company, Greenup, Ill.
Virginian Railway.
Wabash Railroad: Ætna Powder Company, Ætna, Ind.; Great Western Powder Company, Toledo, Ohio.
*Western Maryland Railroad: Rockdale Powder Company, Hoffmanville, Md.
Western Railway of Alabama.
*Wharton and Northern Railroad: General Explosives Company, Lake Junction, N. J.; Picatinny Arsenal, Piccatinny, N. J.
Wheeling and Lake Erie Railroad: Austin Cartridge Company, Falls Junction, Ohio; Austin Powder Company, Falls Junction, Ohio; Great Western Powder Company, Toledo, Ohio.
Total number explosive manufactories, 147; total number fireworks manufactories, 17; total, 164.

Partial list of distributing magazines.

[Compiled by chief inspector, Bureau of Explosives, January 1, 1908. *Lines not Members of the Bureau of Explosives.]

Alabama Great Southern Railroad: Birmingham, Ala.; Chattanooga, Tenn.; Tuscaloosa, Ala.
*Albany and Hudson Railroad: Hudson, N. Y.
Atchison, Topeka and Santa Fe Railway (coast lines): Albuquerque, N. Mex.; Bakersfield, Cal.; Fresno, Cal. (2); Los Angeles, Cal.; Mojave, Cal.

Atchison, Topeka and Santa Fe Railway: Atchison, Kans. (3); Albuquerque, N. Mex. (2); Canon City, Colo.; Colorado Springs, Colo.; Deming, N. Mex.; El Paso, Tex. (3); Emporia, Kans.; Fierro, N. Mex.; Galesburg, Ill.; Guthrie, Okla.; Joliet, Ill.; Las Vegas, N. Mex.; Leeds, Mo.; Oklahoma City, Okla. (3); Pittsburg, Kans.; Pueblo, Colo. (2); Raton, N. Mex. (2); Romeo, Ill.; St. Joseph, Mo. (2); Salina, Kans.; Sante Fe, N. Mex.; Silver City, N. Mex.; Streator, Ill.; Topeka, Kans. (2); Trinidad, Colo.; Wichita, Kans.

*Atlanta, Birmingham and Atlantic Railroad: Bristol, Tenn.

Atlantic Coast Line Railroad: Charleston, S. C.; Columbia, S. C.; Gainesville, Fla.; Jacksonville, Fla.; Ocala, Fla.; Petersburg, Va.; Richmond, Va.; Spartanburg, S. C.; Washington, N. C.

*Asheville and Craggy Mountain Railway: Asheville, N. C.

Bangor and Aroostook Railroad: Bangor, Me. (2); Houlton, Me.

*Bangor and Portland Railroad: Bangor, Pa.

*Baltimore and Ohio Railroad: Baltimore, Md.; Bremen, Md.; Cambridge, Ohio; Clarksburg, W. Va.; Cleveland, Ohio; Columbus, Ohio (2); Connellsville, Pa.; Cumberland, Md.; Evans Station, Pa.; Fostoria, Ohio; Hagerstown, Md.; Harrisonburg, Va.; Highland, W. Va.; Huntington, W. Va. (2); Johnstown, Pa. (4); Kenova, W. Va.; Monongah, W. Va.; Newburg, Ohio; New Castle, Pa.; Piedmont, W. Va.; Rand, Pa. (4); Sandusky, Ohio; Sharpsburg, Pa. (4); Somerset, Pa.; Staunton, Va. (2); Uniontown, Pa.; Wheeling, W. Va. (2); Youngstown, Ohio; Zanesville, Ohio.

*Baltimore and Ohio Southwestern Railroad: Cincinnati, Ohio (3); Columbus, Ohio; Eifort, Ohio; Louisville, Ky. (2); Newport, Ky.; North Vernon, Ind.; Portsmouth, Ohio; Springfield, Ill.; Vincennes, Ind.; Washington, Ind.

Bessemer and Lake Erie Railroad: Greenville, Pa.; Grove City, Pa. (2); Hilliard, Pa.; Kaylor Station, Pa.

*Blue Ridge Railway: Anderson, S. C.

*Boston and Albany Railroad: Boston, Mass.; Hudson, N. Y.; Worcester, Mass.

Boston and Maine Railroad: Boston Harbor, Mass.; Croydon, N. H.; Lancaster, N. H.; Mechanicsville, N. Y.; Nashua, N. H.; Newhall, Me.; Newport, Vt.; Salem, Mass.; Schaghticoke, N. Y.; Sherbrooke, Quebec; South Windham, Me.; Swanton, Vt. (2); West Roxbury, Mass.; Worcester, Mass. (3).

*Buffalo and Susquehanna Railway: Dubois, Pa. (2).

Buffalo, Rochester and Pittsburgh Railway: Bradford, Pa.; Buffalo, N. Y. (9); Clearfield, Pa.; Dubois, Pa. (2); Indiana, Pa.; New Castle, Pa.; Punxsutawney, Pa. (2); Rand, Pa. (4); Rochester, N. Y.; Sharpsburg, Pa. (4).

*Butte, Anaconda and Pacific Railway: Butte, Mont.; Dawson, Mont.

*Canadian Pacific Railway: Burlington, Ontario; Calgary, Alberta; Cody (Sandon), British Columbia; Cranbrook, British Columbia; Greenwood, British Columbia; Hull, Quebec; Isle Perrot, Quebec (2); London, Ontario (2); Nanaimo, British Columbia; Nelson, British Columbia; Northfield, British Columbia; Penticton, British Columbia; Rat Portage (Kenova), Ontario; Rossland, British Columbia; Sault Ste. Marie, Ontario; Silverton, British Columbia; Sudbury, Ontario; Vancouver, British Columbia; Victoria, British Columbia; Wabigoon, Ontario; Waterdown, Ontario; Winnipeg, Manitoba; York, Ontario.

*Central Indiana Railway: Brazil, Ind.

*Central New England Railway: Canaan, Conn.; Poughkeepsie, N. Y.

Central of Georgia Railway: Athens, Ga.; Birmingham, Ala. (7); Chattanooga, Tenn. (5); Rome, Ga. (3); Sterling, Ala. (2).

Central Railroad of New Jersey: Ashley, Pa. (2); Catasauqua, Pa.; Easton, Pa. (2); Jersey City, N. J. (boat); Mauch Chunk, Pa.; Northampton, Pa.; Penobscot, Pa.; Slatington, Pa.; South Wilkesbarre, Pa.; Tamaqua, Pa.; Wilkesbarre, Pa.

Central Vermont Railway: Burlington, Vt.; New London, Conn.; Norwich, Conn.

*Chattanooga Southern Railroad: Chattanooga, Tenn. (5).

Chesapeake and Ohio Railway: Ashland, Ky.; Beckley, W. Va.; Catlettsburg, Ky. (2); Charleston, W. Va.; Charlottesville, Va.; Cincinnati, Ohio (3); Clifton Forge, Va.; Huntington, W. Va. (2); Ironton, Ohio (2); Kenova, W. Va.; Lexington, Ky.; Lynchburg, Va.; Louisville, Ky. (2); Maysville, Ky.; Mount Sterling, Ky.; Morehead, Ky.; Newport, Ky.; Portsmouth, Ohio; Richmond, Va.; Staunton, Va.; Winchester, Ky.

*Chesapeake Western Railway: Harrisonburg, Va.

*Chicago and Alton Railroad: Independence, Mo.; Joliet, Ill.; Leeds, Mo.; Springfield, Ill.; Streator, Ill.; Summit, Ill.

Chicago and Eastern Illinois Railroad: Brazil, Ind.; Danville, Ill.; East St. Louis, Ill. (3); Terre Haute, Ind.

Chicago and Northwestern Railway: Antigo, Wis. (3); Ashland, Wis.; Cedar Rapids, Iowa; Chippewa Falls, Wis.; Clinton, Iowa; Clintonville, Wis.; Commonwealth, Wis.; Crystal Falls, Mich. (2); Cuba City, Ind. (2); Cumberland, Wis.; Deadwood,

S. Dak.; Des Moines, Iowa (3); Douglass, Wyo.; Duluth, Minn.; Florence, Nebr. (4); Fond du Lac, Wis. (2); Galena, Ill.; Grand Rapids, Wis. (2); Green Bay, Wis. (2); Hurley, Wis.; Iron Mountain, Mich. (2); Iron River, Mich.; Ironwood, Mich.; Ishpeming, Mich. (3); Ives, Wis.; Laona, Wis.; Lead City, S. Dak.; Manitowoc, Wis. (2); Mankato, Minn.; Marshalltown, Iowa; Marshfield, Wis.; Milwaukee, Wis. (3); Omaha, Nebr.; Peoria, Ill.; Platteville, Wis.; Pleasant Prairie, Wis. (3); Portland, S. Dak.; Rapid City, S. Dak.; Rhinelander, Wis.; Rice Lake, Wis.; Saylor, Iowa; Sioux City, Iowa; Stambaugh, Mich. (2); Stratford, Wis.; Wakefield, Mich.; Washburn, Wis.; Wausau, Wis.

Chicago, Burlington and Quincy Railroad: Ashburn, Mo. (4); Atchison, Kans.; Aurora, Ill.; Billings, Mont.; Burlington, Iowa; Canton, Ill.; Clinton, Iowa; Custer, S. Dak.; Deadwood, S. Dak.; Derby, Colo.; Des Moines, Iowa (3); East Alton, Ill.; East St. Louis, Ill. (3); Edwards, Ill.; Erie, Colo.; Florence, Nebr. (4); Galena, Ill.; Galesburg, Ill.; Hill City, S. Dak.; Keystone, S. Dak.; La Motte, Mo.; Lead City, S. Dak.; Leeds, Mo.; Mid Oaks, Minn. (4); Moline, Ill.; Mooar, Iowa; Omaha, Nebr.; Ottumwa, Iowa (2); Peoria, Ill.; Pluma, S. Dak.; Portland, S. Dak.; St. Joseph, Mo. (2); Sioux City, Iowa; Spearfish, S. Dak.; Streator, Ill.

*Chicago Great Western Railway: Des Moines, Iowa (3); Duquque, Iowa; Florence, Nebr. (4); Mankato, Wis.; Mid Oaks, Minn. (4); Omaha, Nebr.; St. Joseph, Mo. (2).

*Chicago, Indiana and Southern Railroad: Danville, Ill.; Streator, Ill.

Chicago, Indianapolis and Louisville Railway: Bloomington, Ind.; Crawfordsville, Ind.; Indianapolis, Ind. (2); Linton, Ind.; Louisville, Ky. (2).

*Chicago Milwaukee and St. Paul Railway: Cedar Rapids Iowa; Chippewa Falls, Wis.; Clinton Iowa; Crystal Falls Mich. (2); Dell Rapids S. Dak.; Des Moines Iowa (3); Dubuque Iowa; Florence Nebr. (4); Fond du Lac. Wis. (2); Green Bay, Wis. (2); Iron Mountain Mich. (2); Lannon. Wis.; Leeds Mo.; Manitowoc Wis.; Mankato Minn.; Merrill Wis.; Mid Oaks Minn. (4); Milwaukee Wis. (3); Mineral Point, Wis.; Moline Ill.; Mosinee Wis.; Omaha Nebr.; Ontonagon Mich.; Ottumwa, Iowa (2); Pittsville, Wis.; Platteville, Wis. (2); Pleasant Prairie, Wis. (3); Shullsburg, Wis.; Wausau Wis.

Chicago, Rock Island and Gulf Railway: Bridgeport, Tex.; Dallas, Tex.; Fort Worth Tex. (2).

Chicago Rock Island and Pacific Railway: Atchison, Kans.; Burlington, Iowa; Cedar Rapids Iowa; Clinton, Iowa (2); Colorado Springs Colo.; Derby, Colo.; Des Moines Iowa (3); El Reno Okla.; Florence, Nebr. (4); Fort Smith, Ark.; Guthrie, Okla.; Hartshorne, Okla.; Hughes Okla.; Independence, Mo.; Joliet, Ill.; Kansas City, Mo.; Laddsdale Iowa; Leavenworth, Kans.; Leeds, Mo.; Little Rock, Ark.; Memphis Tenn.; Mid Oaks, Minn. (4); Moline Ill.; Oklahoma City, Okla.; Omaha, Nebr.; Ottumwa, Iowa (2); Pueblo, Colo. (2); St. Joseph, Mo. (2); Topeka, Kans.; Waterloo Iowa; Wichita Kans.

*Chicago, Peoria and St. Louis Railway: Springfield, Ill.

Chicago, St. Paul, Minneapolis and Omaha Railway: Barksdale, Wis.; Chippewa Falls, Wis. (2); Duluth, Minn.; Florence, Nebr. (4); Iron Mountain, Mich. (2); Marshfield, Wis.; Mid Oaks, Minn. (4); Rice Lake, Wis.; St. Paul, Minn.; Superior, Wis.; Sioux City, Iowa; Washburn, Wis.

*Cincinnati, Hamilton and Dayton Railway: Cincinnati, Ohio; Decatur, Ill.; Delphos, Ohio; Fort Wayne, Ind.; Indianapolis, Ind. (2); Lima, Ohio; Newport, Ky.; Xenia, Ohio.

Cincinnati, New Orleans and Texas Pacific Railway: Chattanooga, Tenn. (5); Cincinnati, Ohio (3); Newport, Ky.

Cincinnati Northern Railroad: Greenville, Ohio; Newport, Ky.

Cleveland, Akron and Columbus Railway: Akron, Ohio; Columbus, Ohio (2); Zanesville, Ohio.

Cleveland, Cincinnati, Chicago and St. Louis Railway (Big "4"): Cincinnati, Ohio (3); Columbus, Ohio (2); Crawfordsville, Ind.; Danville, Ill.; East Alton, Ill.; East St. Louis, Ill. (3); Farmland, Ind.; Fontanet, Ind.; Indianapolis, Ind. (2); Louisville, Ky.; Mount Carmel, Ill.; Newport, Ky.; North Vernon, Ind.; Peoria, Ill.; Sandusky, Ohio; Springfield, Ohio; Terre Haute. Ind.; Vincennes, Ind.

Coal and Coke Railway: Belington, W. Va.; Charleston, W. Va. (5).

*Cœur d'Alene and Spokane Railway: Spokane, Wash.

*Colorado and Northwestern Railroad: Boulder, Colo.

*Colorado and Southern Lines: Boulder, Colo.; Colorado Springs, Colo.; Derby, Colo. (2); Gunnison, Colo.; Leadville, Colo.; Pueblo, Colo. (2); Trinidad, Colo.

*Colorado and Wyoming Railway: Trinidad, Colo.

*Colorado Midland Railway: Colorado Springs, Colo.; Grand Junction, Colo.; Leadville, Colo.

*Colorado Springs and Cripple Creek District Railway: Colorado Springs, Colo.
*Columbia and Puget Sound Railroad: Black River Junction, Wash.
*Copper Range Railroad: Hancock, Mich.
*Cumberland and Pennsylvania Railroad: Cumberland, Md.; Piedmont, W. Va.
Cumberland Valley Railroad: Carlisle, Pa.; Chambersburg, Pa.; Hagerstown, Md.; Mechanicsburg, Pa.; Waynesboro, Pa.
*Danville and Western Railway: Danville, Va.
*Davenport, Rock Island and Northwestern Railway: Moline, Ill.
*Dayton and Union Railroad: Greenville, Ohio.
Delaware and Hudson Company: Albany, N. Y.; Crown Point, N. Y.; Fair Haven, Vt.; Fort Ann, N. Y.; Fort Edward, N. Y.; Glens Falls, N. Y.; Jermyn, Pa.; Moosic, Pa.; Peckville, Pa.; Plattsburg, N. Y.; Port Henry, N. Y.; Poultney, Vt.; Rutland, Vt.; Saranac Lake, N. Y.; Schenectady, N. Y.; Ticonderoga, N. Y.; Wilkesbarre, Pa.
*Delaware, Lackawanna and Western Railroad: Buffalo, N. Y. (9); Catawissa, Pa.; Easton, Pa. (2); Elmira, N. Y.; Paterson, N. J.; Peckville, Pa.; Pittston, Pa.; Plymouth, Pa.; Syracuse, N. Y. (3).
*Delaware Valley Railroad: Stroudsburg, Pa.
*Denver and Rio Grande Railroad: Canon City, Colo.; Colorado Springs, Colo.; Derby, Colo.; Durango, Colo.; Grand Junction, Colo.; Gunnison, Colo.; Leadville, Colo.; Pueblo, Colo. (2); Santa Fe, N. Mex.; Silverton, Colo.; Trinidad, Colo.
*Des Moines, Iowa Falls and Northern Railway: Des Moines, Iowa (3).
Detroit and Mackinac Railway: Cheboygan, Mich.
*Detroit and Toledo Shore Line Railroad: Monroe, Mich.
*Detroit, Toledo and Ironton Railway: Ironton, Ohio (2); Lima, Ohio; Springfield, Ohio.
*Duluth and Iron Range Railroad: Biwabik, Minn.; Duluth, Minn.; Ely, Minn.; Eveleth, Minn.; Tower, Minn.; Two Harbors, Minn.; Virginia, Minn.
*Duluth, Missabe and Northern Railway; Biwabik, Minn.; Coleraine, Minn.; Duluth, Minn.; Hibbing, Minn.; Virginia, Minn.
*Duluth, Rainy Lake and Winnipeg Railway: Virginia, Minn.
*Duluth, South Shore and Atlantic Railway: Duluth, Minn.; Houghton, Mich.; Ishpeming, Mich. (3.); Superior, Wis.
*East Tennessee and Western North Carolina Railroad: Johnson City, Tenn.
Eastern Railway of New Mexico: Carlsbad, N. Mex.
*Elgin, Joliet and Eastern Railway: Joliet, Ill.
El Paso and Southwestern System: Bisbee, Ariz.; Douglas, Ariz.; El Paso, Tex.; Tombstone, Ariz.
Erie Railroad: Akron, Ohio; Blossburg, Pa.; Bradford, Pa.; Buffalo, N. Y. (9); Cleveland, Ohio; Corry, Pa.; Elmira, N. Y.; Greenville, Pa.; Lima, Ohio; Lockport, N. Y.; Moosic (Nay-Aug.), Pa.; Newburg, Ohio; New Castle, Pa.; Paterson, N. J.; Port Jervis, N. Y.; Rochester, N. Y.; Stroudsburg, Pa.; West Newburg, N. Y.; Wilkes-Barre, Pa.; Youngstown, Ohio.
Evansville and Indianapolis Railroad: Brazil, Ind.; Evansville, Ind. (2); Indianapolis, Ind.; Terre Haute, Ind.; Washington, Ind.
Evansville and Terre Haute Railroad: Evansville, Ind. (2); Terre Haute, Ind.; Vincennes, Ind.
*Evansville, Suburban and Newburgh Railway: Evansville, Ind. (2).
*Florence and Cripple Creek Railroad: Canon City, Colo.
*Florida East Coast Railway: Jacksonville, Fla.; Miami, Fla.
*Fort Smith and Western Railroad: El Reno, Ark.; Fenn, Ark.; Fort Smith, Ark.; Guthrie, Okla.
*Fort Worth and Denver City Railway: Fort Worth, Tex.
*Gainesville Midland Railway: Athens, Ga.
*Galveston, Houston and Henderson Railroad: Houston, Tex.
*George's Creek and Cumberland Railroad: Cumberland, Md.
*Georgetown and Western Railroad: Georgetown, S. C.
*Georgia Railroad: Athens, Ga.; Atlanta, Ga.
*Georgia Southern and Florida Railway: Jacksonville, Fla.
*Glenn Springs Railroad: Spartanburg, S. C.
Grand Rapids and Indiana Railway: Fort Wayne, Ind.; Grand Rapids, Mich.; Petoskey, Mich.; Traverse City, Mich.
Grand Trunk Railway System: Belœil, Quebec; Buffalo, N. Y.; Buckingham, Quebec; Burlington, Ontario; Coti St. Luc, Quebec; Grand Rapids, Mich.; Hamilton, Ontario; Hagersville, Ontario (2); Hull, Quebec; Isle Perrot, Quebec; Kawkawlin, Mich.; Lachine, Quebec; London, Ontario; Milwaukee, Wis. (2); Saginaw, Wis. (2); Swanton, Vt. (2); Toronto, Ontario; Waterdown, Ontario; Windsor Mills, Quebec; York, Ontario.

*Great Northern Railway Line: Bellingham, Wash.; Butte, Mont.; Duluth, Minn.; Great Falls, Mont.; Helena, Mont.; Hibbing, Minn.; Leeds, Iowa; Mid Oaks, Minn. (4); Nashwauk, Minn.; Neihart, Mont.; Sioux City, Iowa; Spokane, Wash.; Virginia, Minn.

*Green Bay and Western Railroad: Coyne, Wis.; Green Bay, Wis. (2); Stevens Point, Wis.

Gulf, Colorado and Santa Fe Railway: Beaumont, Tex.; Dallas, Tex.; Fort Worth, Tex.; Houston, Tex.; Paris, Tex.; Sherman, Tex.

Hocking Valley Railway: Charleston, W. Va.; Columbus, Ohio; Fostoria, Ohio; Galliopolis, Ohio.

Houston and Texas Central Railroad: Austin, Tex.; Dallas, Tex.; Fort Worth, Tex.; Houston, Tex.

Houston and Shreveport Railroad: Shreveport, La.

Houston, East and West Texas Railway: Houston, Tex.; Nacogdoches, Tex.

*Huntingdon and Broad Top Mountain Railroad: Everetts, Pa.

Illinois Central Railroad: Cedar Rapids, Iowa; Church, Ill.; Decatur, Ill.; East St. Louis, Ill. (3); Evansville, Ind. (2); Florence, Nebr. (4); Fort Dodge, Iowa; Galena, Ill.; Hampton Switch, Tenn. (2); Jackson, Miss.; Leeds, Iowa; Louisville, Ky. (2); Memphis, Tenn.; Nashville, Tenn.; New Orleans, La. (2); Omaha, Nebr.; Owensboro, Ky. (2); Peoria, Ill.; Sioux City, Iowa; Springfield, Ill.; Vicksburg, Miss.; West Belleville, Ill.; Yazoo City, Miss.

*Illinois, Iowa and Minnesota Railway: Joliet, Ill.

*Indiana, Columbus and Eastern Traction Company: Lima, Ohio.

Indianapolis Southern Railroad (Illinois Central Railroad): Bloomington, Ind.; Indianapolis, Ind. (2); Lenton, Ind.

*International and Great Northern Railroad: Austin, Tex.; Fort Worth, Tex.; Houston, Tex.; Tyler, Tex.

*Kansas City, Clinton and Springfield Railway: Clinton, Mo.; Deepwater, Mo.; Springfield, Mo.

* Kansas City, Mexico and Orient Railway: Wichita, Kans.

* Kansas City Southern Railway: Fenn, Ark.; Fort Smith, Ark.; Independence, Mo.; Joplin, Mo. (3); Leeds, Mo.; Pittsburg, Kans.; Shreveport, La.; Texarkana, Tex.; Westville, Okla.

* Kewaunee, Green Bay and Western Railroad: Green Bay, Wis. (2).

* Lackawanna and Wyoming Valley Railroad: Moosic, Pa.; Wilkes-Barre, Pa.

* Lake Champlain and Moriah Railroad: Port Henry, N. Y.

Lake Erie and Western Railroad: Bloomington, Ill.; East Peoria, Ill.; Fostoria, Ohio; Hartford City, Ind.; Indianapolis, Ind. (2); Lima, Ohio; Peoria, Ill.; Sandusky, Ohio.

Lake Shore and Michigan Southern Railway: Brookfield, Ohio; Buffalo, N. Y.; Cleveland, Ohio; Eagle Mills, Mich.; Erie, Pa.; Fort Wayne, Ind.; Grand Rapids, Mich.; Joliet, Ill.; Monroe, Mich.; Sandusky, Ohio; Sharon, Pa.; Warner, Mich.; Youngstown, Ohio.

* Lake Superior and Ishpeming Railway: Ishpeming, Mich.

* Lancaster, Oxford and Southern Railroad: Lancaster, Pa.

* Leavenworth and Topeka Railway: Topeka, Kans.

* Lehigh and Hudson River Railroad: Easton, Pa.

Lehigh Valley Railroad: Ashland, Pa.; Bangor, Pa.; Buffalo, N. Y. (9); Catasauqua, Pa.; Dallas, Pa.; Easton, Pa. (2); Exeter, Pa.; Hazleton, Pa.; Jeddo, Pa.; Mahanoy City, Pa.; Pottsville, Pa.; Rochester, N. Y.; Slatington, Pa.; South Wilkes-Barre, Pa.; Tomhicken, Pa.; Tonawanda (Township), N. Y.; Wilkes-Barre, Pa.

Lehigh and New England Railroad: Slatington, Pa.

* Lexington and Eastern Railway: Lexington, Ky.; Winchester, Ky.

* Little Falls and Dolgeville Railway: Little Falls, N. Y.

* Louisiana Railway and Navigation Company: New Orleans, La. (2).

Louisville and Nashville Railroad: Anniston, Ala. (2); Big Stone Gap, Va.; Birmingham, Ala.; Cincinnati, Ohio (3); Evansville, Ind. (2); Jellico, Tenn. (8); Knoxville, Tenn. (8); Lexington, Ky.; Louisville, Ky. (2); Madisonville, Ky.; Maysville, Ky.; Memphis, Tenn. (2); Mobile, Ala.; Nashville, Tenn.; New Orleans, La. (2); Newport, Ky.; Owensboro, Ky.; Winchester, Ky.

Louisville, Henderson and St. Louis Railway: Evansville, Ind. (2); Louisville, Ky.; Owensboro, Ky.

* Maine Central Railroad: Bangor, Me. (2); Bath, Me.; Newhall, Me.; Rockland, Me.

* Manistee and Northeastern Railroad: Traverse City, Mich.

* Marquette and Southeastern Railway: Superior, Wis.

* Maryland, Delaware and Virginia Railway: Baltimore, Md.

* Maryland and Pennsylvania Railroad: York, Pa.

* Mary Lee Railroad: Lewisburg, Ala.

Michigan Central Railroad: Buffalo, N. Y.; Grand Rapids, Mich.; Hagersville, Ontario (2); London, Ontario (2); Milwaukee, Wis.; Monroe, Mich.; Saginaw, Mich. (2).

* Mineral Point and Northern Railway: Mineral Point, Wis.

* Mineral Range Railroad: Hancock, Mich.; Houghton, Mich.; Swedestown, Mich.

* Minneapolis and St. Louis Railroad: Des Moines, Iowa (3); Mid Oaks, Minn. (4).

* Minneapolis, St. Paul and Sault Ste. Marie Railway: Duluth, Minn.; Mid Oaks, Minn. (4); Rice Lake, Wis. (3).

Missouri, Kansas and Texas Railway: Austin, Tex.; Chitwood, Mo.; Clinton, Mo.; Columbus, Kans.; Dallas, Tex.; Eagle Ford, Tex.; East St. Louis, Ill. (3); East Waco, Tex.; Emporia, Kans.; Fort Scott, Kans.; Fort Worth, Tex.; Galena, Kans. (2); Guthrie, Okla.; Houston, Tex.; Joplin, Mo.; Leeds, Mo.; Oklahoma, Okla.; Oklahoma City, Okla. (3); Patterson, Okla.; San Antonio, Tex.; Sedalia, Mo.; Sherman, Tex.; Shreveport, La.; Turk, Kans.; Wilburton, Okla.

Missouri Pacific Railway: Atchison, Kans.; Aurora, Mo. (3); East St. Louis, Ill. (3); Eureka, Mo.; Florence, Nebr. (4); Fort Scott, Kans.; Fort Smith, Ark.; Granby, Mo.; Independence, Mo.; Joplin, Mo. (3); Kansas City, Mo.; Leeds, Mo.; Little Rock, Ark.; Memphis, Tenn.; Natchez, Miss.; Omaha, Nebr.; Pacific, Mo.; Pine Bluff, Ark.; Pittsburg, Kans.; Pueblo, Colo. (2); St. Joseph, Mo. (2); Sedalia, Mo.; Springfield, Mo.; Topeka, Kans.; Valley Park, Mo.; Webb City, Mo. (3); Wichita, Kans.

* Missouri River and Northwestern Railway: Rapid City, S. Dak.

* Mobile and Ohio Railroad: Mobile, Ala.; Tuscaloosa, Ala.

* Mobile and Western Railroad: Mobile, Ala.

* Mobile, Jackson and Kansas City Railroad: Mobile, Ala.

* Monson Railroad: Monson, Me.

* Nashville, Chattanooga and St. Louis Railway: Atlanta, Ga.; Chattanooga, Tenn. (5); Memphis, Tenn.; Nashville, Tenn.; Rome, Ga. (3).

New Orleans and Northeastern Railroad: New Orleans, La. (2); Shreveport, La.; Vicksburg, Miss. (2).

* New Orleans, Fort Jackson and Grand Isle Railroad: New Orleans, La. (2).

* New Orleans Great Northern Railroad: New Orleans, La. (2).

* New Orleans Terminal Company: New Orleans, La. (2).

* New York and Pittsburg Air Line Railroad: Houtsdale, Pa.; Philipsburg, Pa.

New York Central and Hudson River Railroad: Albany, N. Y.; Amsterdam, N. Y.; Antwerp, N. Y.; Arcadia, Pa. (4); Bellefonte, Pa.; Bloomington, N. Y.; Booneville, N. Y.; Buffalo, N. Y. (9); Burnside, Pa.; Canton, N. Y.; Carthage, N. Y.; Catskill, N. Y.; Clearfield, Pa.; Esopus, N. Y.; Fort Plain, N. Y. (2); Gouverneur, N. Y.; Hudson, N. Y.; Kingston, N. Y.; Little Falls, N. Y.; Lock Haven, Pa.; Lockport, N. Y.; Madera, Pa.; Mahaffey, Pa.; Morrisdale, Mines, Pa.; Malone Junction, N. Y.; New York Harbor, New York; Ogdensburg, N. Y.; Ossining, N. Y.; Philipsburg, Pa.; Poughkeepsie, N. Y.; Rochester, N. Y.; Rosendale, N. Y.; St. Benedict, Pa.; Saranac Lake, N. Y.; Schenectady, N. Y.; Shanktown, Pa.; Snow Shoe, Pa.; Syracuse, N. Y.; Talcville, N. Y.; Tonawanda Township, N. Y.; Wallaceton, Pa.; Watertown, N. Y.; Wellsboro, Pa.; West Newburgh, N. Y.; White Plains, N. Y.; Whiteport, N. Y.

*New York, Chicago and St. Louis Railroad (Nickel Plate): Buffalo, N. Y.; Erie, Pa.; Fort Wayne, Ind.; Fostorio, Ohio.

*New York, New Haven and Hartford Railroad: Boston, Mass.; Bridgeport, Conn.; Canaan, Conn.; New Britain, Conn.; New London, Conn.; New York Harbor, N. Y.; Norwich, Conn.; Poughkeepsie, N. Y.; Quincy, Mass.; Waterbury, Conn.; West Torrington, Conn.; Worcester, Mass.

New York, Ontario and Western Railway: Jermyn, Pa.; Peckville, Pa.; Port Jervis, N. Y.

Norfolk and Southern Railroad: Elizabeth City, N. C.; Washington, N. C.

Norfolk and Western Railway: Ardway, Va.; Ashland, Ky.; Bedford, Va.; Bluefield, W. Va.; Bristol, Tenn. (2); Cincinnati, Ohio (3); Columbus, Ohio (2); Gary, W. Va.; Glen Lyn, Va.; Hagerstown, Md.; Ironton, Ohio (2); Ivanhoe, Va.; Lynchburg, Va. (2); Newport, Ky.; Norton, Va.; Petersburg, Va.; Portsmouth, Ohio; Pulaski, Va.; Roanoke, Va. (4); Salem, Va.; South Boston, Va.; Suffolk, Va.; Welsh, W. Va.; Williamson, W. Va.; Winston-Salem, N. C. (2).

Northern Ohio Railway: Delphos, Ohio.

*Northern Pacific Railway: Ashland, Wis.; Atchison, Kans.; Bellingham, Wash.; Billings, Mont.; Black River Junction, Wash.; Butte, Mont.; Deer Lodge, Mont.; Deerwood, Minn.; Duluth, Minn.; Helena, Mont.; Marshall, Wash.; Marysville, Mont.; Mid Oaks, Minn. (4); Missoula, Mont.; Spokane, Wash.; Washburn, Wis.; Wilbur, Wash.

*Ohio River and Western Railway: Zanesville, Ohio.

Oregon Railroad and Navigation Company: Pendleton, Oreg.

Oregon Short Line Railroad: Beck's Hot Springs, Utah (2); Boise, Idaho; Butte, Mont.; Hailey, Idaho; Melrose, Mont.; Nampa, Idaho; Salt Lake City, Utah; Virginia City, Mont.

Pennsylvania Lines: Carnegie, Pa. (2); Cincinnati, Ohio (3); Columbus, Ohio (2); Conesville, Ohio; Coshocton, Ohio; Delphos, Ohio; Edinburg, Ind.; Erie, Pa.; Fort Wayne, Ind.; Goes, Ohio; Greenville, Ohio; Greenville, Pa.; Hillsville, Pa.; Houston, Pa.; Indianapolis, Ind. (2); Lima, Ohio; Louisville, Ky. (2); Newburg, Ohio; New Castle, Pa.; Newport, Ky.; North Vernon, Ind.; Oakdale, Pa.; Sandusky, Ohio; Shelbyville, Ind.; Steubenville, Ohio (2); Walkers Mills, Pa.; (2) Wheeling, W. Va. (2); Xenia, Ohio; Zanesville, Ohio.

Pennsylvania Railroad: Bainbridge, Pa.; Baltimore, Md.; Bedford, Pa.; Belle Fonte, Pa.; Braderville, Pa.; Bradford, Pa.; Buffalo, N. Y.; Burnside, Pa.; Catawissa, Pa.; Cedar Hollow, Pa.; Clearfield, Pa.; Coalport, Pa.; Connellsville, Pa.; Corry, Pa.; Cumberland, Md.; Dubois, Pa. (2); Easton, Pa.; Elmira, N. Y.; Erie, Pa.; Evans Station, Pa.; Farrandsville, Pa.; Geistown, Pa.; Harrisburg, Pa.; (arsenal) Hazleton, Pa.; Houtsdale, Pa.; Huntingdon, Pa.; Indiana, Pa.; Johnstown, Pa. (4); Kittaning, Pa.; Lancaster, Pa. (2); Lewistown, Pa.; Lock Haven, Pa.; Mahaffey, Pa.; Mahanoy City, Pa.; Mapleton, Pa.; Milbourne Mills, Philadelphia, Pa.; New Castle, Pa.; New Holland, Pa.; New York Harbor, New York; Norristown, Pa. (2); Patton, Pa. (2); Pavonia, N. J. (arsenal); Paxinos, Pa.; Philipsburg, Pa. (3); Pottsville, Pa. (2); Punxsutawney, Pa. (2); Rand, Pa. (4); Reading, Pa. (5); Reynoldsville, Pa. (2); Rochester, N. Y.; Shamokin, Pa.; Sharon Hill, Pa.; Sharpsburg, Pa. (4); Shenandoah, Pa.; Snow Shoe, Pa.; Sonman, Pa.; South Wilkesbarre, Pa.; Spangler, Pa.; Tamaqua, Pa.; Titusville, Pa.; Trenton, N. J.; Uniontown, Pa.; Wheeling, W. Va.; Wilkesbarre, Pa.; York, Pa.; Youngstown, Ohio.

Pere Marquette System: Buffalo, N. Y.; Grand Ledge, Mich.; Gand Rapids, Mich.; London, Ontario (2); Milwaukee, Wis. (2); Monroe, Mich.; Petoskey, Mich.; Saginaw, Mich. (2); Traverse City, Mich.

Philadelphia and Reading Railway: Ashland, Pa.; Carlisle, Pa.; Catawissa, Pa.; Catasauqua, Pa.; Gettysburg, Pa.; Lancaster, Pa. (2); Macungie, Pa.; Mahanoy City, Pa.; Norristown, Pa. (2); Paxinos, Pa.; Pottsville, Pa. (2); Reading, Pa. (5); Shainline, Pa.; Shamokin, Pa.; Shenandoah, Pa.; Slatington, Pa.; Tamaqua, Pa.; Trenton, N. J.; Williamsport, Pa.

Pittsburgh and Lake Erie Railroad: Hillsville, Pa.; New Castle, Pa.; Rand, Pa. (4); Youngstown, Ohio.

*Pittsburg, Westmoreland and Somerset Railroad: Somerset, Pa.

*Richmond, Fredericksburg and Potomac Railroad: Richmond, Va.

*Rio Grande Southern Railroad: Durango, Colo.

*Rio Grande Western Railway: Dalton, Utah; Eureka, Utah; Grand Junction, Colo.; Park City, Utah; Salt Lake City, Utah.

Rutland Railroad: Burlington, Vt.; Malone Junction, N. Y.; Ogdensburg, N. Y.; Old Chatham, N. Y.; Rutland, Vt.; Swanton, Vt. (2); Ticonderoga, N. Y.

St. Joseph and Grand Island Railway: St. Joseph, Mo. (2).

St. Louis and San Francisco Railroad: Aurora Mo. (3); Beaumont, Tex.; Baxter, Kans. (2); Birmingham, Ala. (7); Canon City, Colo.; Clinton, Mo.; East St. Louis, Ill. (3); Eureka Mo.; Fenn, Ark.; Fort Scott Kans.; Fort Smith Ark.; Fort Worth, Tex.; Galena, Kans. (2); Granby, Mo. (2); Holmes Park, Mo.; Joplin, Mo. (3); Kansas City, Mo.; Leeds, Mo.; Memphis, Tenn.; Oklahoma City, Okla.; Pacific, Mo.; Pittsburg, Kans.; Springfield, Mo.; Sterling Ala. (2); Turck, Kans.; Valley Park, Mo.; Webb City, Mo. (3); Westville, Okla.; Wichita, Kans.

*St. Louis, El Reno and Western Railway: El Reno, Okla.; Guthrie, Okla.

St. Louis, Iron Mountain and Southern Railway (Missouri Pacific Railway): Aurora, Mo. (3); Fenn, Ark.; Little Rock, Ark.; Memphis, Tenn.; Springfield, Mo.; Texarkana, Tex.

St. Louis Southwestern Railway System: Camden, Ark.; Corsicana, Tex.; Dallas, Tex. (3); East St. Louis, Ill. (3); Fort Worth, Tex.; Little Rock, Ark. (4); Memphis, Tenn.; Pine Bluff, Ark.; Sherman, Tex.; Shreveport, La.; Texarkana, Ark.; Texarkana, Tex ; Tyler, Tex.; Waco, Tex. (5).

*Salt Lake and Los Angeles Railway: Salt Lake City, Utah.

*Salt Lake and Ogden Railway: Salt Lake City, Utah.

San Antonio and Aransas Pass Railway: Houston, Tex.; San Antonio, Tex.

*San Pedro, Los Angeles and Salt Lake Railroad: Eureka, Utah; Los Angeles, Cal.; Milford, Utah; Salt Lake City, Utah.

*Santa Fe Central Railway: Santa Fe, N. Mex.

*Santa Fe, Prescott and Phoenix Railway: Phoenix, Ariz.

Seaboard Air Line Railway: Athens, Ga.; Atlanta, Ga.; Birmingham, Ala. (7); Charleston, S. C.; Charlotte, N. C.; Chester, S. C.; Gainesville, Fla.; Jacksonville,

Fla.; Monroe, N. C.; Ocala, Fla.; Petersburg, Va.; Richmond, Va.; Sterling, Ala. (2); Wilmington, N. C.

*Silverton Railway: Silverton, Colo.

*Silverton Northern Railroad: Silverton, Colo.

*South and Western Railroad: Johnson City, Tenn.

Southern Indiana Railway: Linton, Ind.; Terre Haute, Ind.

Southern Pacific Lines: Auburn, Cal. (2); Bakersfield, Cal.; Battle Mountain, Nev. (2); Colton, Cal.; Deming, N. Mex.; El Dorado, Cal.; Elko, Nev. (2); Fresno, Cal.; Golconda, Nev.; Grants Pass, Oreg.; Haskell, Oreg.; Houston, Tex.; Lordsburg, Ariz.; Los Angeles, Cal.; Mojave, Cal.; Patagonia, Ariz.; Reno, Nev. (3); San Bernardino, Cal.; San Antonio, Tex.; Tucson, Ariz.; Valley Spring, Cal. (3); Winnemucca, Nev.; Yuma, Ariz.

Southern Railway: Anderson, S. C.; Anniston, Ala. (2); Asheville, N. C. (2); Athens, Ga.; Atlanta, Ga.; Augusta, Ga.; Birmingham, Ala. (7); Boyles, Ala.; Bristol, Tenn. (2); Charleston, S. C.; Charlotteville, Va.; Charlotte, N. C.; Chattanooga, Tenn. (2); Concord, N. C.; Danville, Va.; East St. Louis, Ill. (3); Evansville, Ind. (2); Gadsden, Ala.; Gastonia, N. C.; Goldhill, N. C.; Greensboro, N. C.; Greenville, S. C. (3); Harrisonburg, Va.; Jacksonville, Fla.; Jellico, Tenn.; Johnson City, Tenn.; Knoxville, Tenn. (8); Lewisburg, Ala.; Lexington, Ky.; Louisville, Ky. (2); Lynchburg, Va. (4); Memphis, Tenn.; Mount Carmel, Ill.; Mobile, Ala.; Marlow, Tenn.; Nashville, Tenn. (2); North Birmingham, Ala.; North Wilkesboro, N. C.; Richmond, Va. (7); Riverside, Tenn. (2); Roanoke, Va.; Rome, Ga. (3); Salisbury, N. C. (2); Sterling, Ala. (2); Sylvia, N. C.; Virgilina, Va.

*Spokane and Inland Railway: Spokane, Wash.

*Spokane Falls and Northern Railway: Spokane, Wash.

*Spokane International Railway: Spokane, Wash.

*Sumpter Valley Railway: Sumpter, Oreg.

*Tampa and Jacksonville Railway: Gainesville, Fla.

Terminal Railroad Association of St. Louis: East St. Louis, Ill. (3).

Texas and New Orleans Railroad: Dallas, Tex; Houston, Tex.; Nacogdoches, Tex.

*Texas and Pacific Railway: Dallas, Tex.; Fort Worth, Tex.; New Orleans, La. (2); Shreveport, La.; Texarkana, Tex.

*Toledo, St. Louis and Western Railway: Delphos, Ohio.

*Toledo, Peoria and Western Railway: Burlington, Iowa (2); Canton, Ill.; East Peoria, Ill.; Peoria, Ill.

*Tonopath and Goldfield Railroad: Tonopah, Nev.

Trinity and Brazos Valley Railway: Dallas, Tex.; Fort Worth, Tex.; Houston, Tex.

*Tuscaloosa Belt Railway: Tuscaloosa, Als.

Union Pacific Railroad: Boulder, Colo.; Council Bluffs, Iowa; Derby, Colo.; Erie, Colo.; Florence, Nebr. (4); Fremont, Nebr.; Leeds, Mo.; Omaha, Nebr.; Park City, Utah (2); Rock Springs, Wyo.; Salina, Kans.; Topeka, Kans. (2).

Vandalia Railroad: Brazil, Ind.; Crawfordsville, Ind.; East St. Louis, Ill. (3); Indianapolis, Ind. (2); Peoria, Ill.; Terre Haute, Ind.; Vincennes, Ind.

*Virginia and Southwestern Railway: Big Stone Gap, Va.

Wabash Railroad: Buffalo, N. Y.; Carnegie, Pa. (2); Danville, Ill.; Dawson, Ill.; Decatur, Ill.; Des Moines, Iowa (3); East St. Louis, Ill. (3); Florence, Nebr. (4); Fort Wayne, Ind.; Omaha, Nebr.; Ottumwa, Iowa (2); Rand, Pa. (4); Sharpsburg, Pa. (4); Springfield, Ill.; Wakarusa, Ind.

*Washburn and Northwestern Railway: Washburn, Wis.

*Western and Atlantic Railroad: Atlanta, Ga.; Chattanooga, Tenn. (5).

*Western Maryland Railroad: Baltimore, Md.; Blaine, W. Va.; Cumberland, Md.; Chambersburg, Pa.; Gettysburg, Pa.; Hagerstown, Md.; Hendricks, W. Va.; Waynesboro, Pa.; Westminster, Md.; York, Pa.

*Western Ohio Railway: Lima, Ohio.

Wheeling and Lake Erie Railroad: Wheeling, W. Va. (2).

*Wilkes-Barre and Hazleton Railway: Ashley, Pa.; Wilkes-Barre, Pa.

Williams Valley Railroad: Tower City, Pa.

*Wilmington Seacoast Railway: Wilmington, N. C.

*Wisconsin Central Railway: Antigo, Wis.; Ashland, Wis.; Chippewa Falls, Wis.; Fond du Lac, Wis. (2); Hurley, Wis.; Ironwood, Wis.; Manitowoc, Wis. (2); Marshfield, Wis.; Mid Oaks, Wis. (4); Milwaukee, Wis. (3); Stevens Point, Wis.; Tomahawk, Wis.

Yazoo and Mississippi Valley Railroad (Illinois Central): Memphis, Tenn.; New Orleans, La. (2).

*Yreka Railroad: Yreka, Cal.

The information at hand, January 1, 1908, shows the number of magazines to be, approximately, 1,200, but until inspection can be made of each magazine the list can not be considered as correct.

Mr. MANN. It is said, Doctor, that there is a powder trust.

Doctor DUDLEY. You can not prove anything on it by me. [Laughter.]

Mr. MANN. Where do you get most of the high explosives and powder that are offered for shipment over the Pennsylvania Railroad?

Doctor DUDLEY. From New Jersey and Pennsylvania. There is a very interesting feature connected with that, namely, that we have raised the question in the interest of the safe transportation of explosives—the question, "Why don't you distribute your works and make explosives near where they are to be used?" Explosives made in Pennsylvania are taken away down to the City of Mexico, and explosives made in New Jersey are used away out in Denver. We say, "Why not take your explosive factories and establish them near where the product is to be used, and thus remove this menace to safety?"

Mr. MANN. What is the principal manufacturer that deals with your company?

Doctor DUDLEY. I suppose the E. I. du Pont de Nemours Powder Company.

Mr. MANN. What percentage of the whole amount do they offer for shipment?

Doctor DUDLEY. I could not give that to you. I am not up on the technical side.

Mr. BARTLETT. Where are their factories located?

Doctor DUDLEY. They are in New Jersey mostly. The reason why these works are located where they are located is as follows: For every pound of explosive that goes into the factory 5 pounds of raw material go into it. That raw material is glycerin, nitrate of soda, sulphur, and other things. Most of the nitrate of soda comes from Chile, and also sulphuric acid. All those are heavy bodies. The transportation of raw materials to Denver and the manufacture of the product there would be expensive. A large proportion of the glycerin is imported, and the nitrate of soda is imported, and sulphur is imported, so that these heavy raw materials entering into the manufacture of explosives would have to be transported across the country if the manufacture were conducted at the points I have mentioned. It is deemed more economical to concentrate the establishments at points where the freight rates on the raw materials would be diminished.

Mr. MANN. We are not interested in that part of it. I am trying to find out where they are located. What other concern besides the Du Pont concern patronizes the Pennsylvania Railroad?

Doctor DUDLEY. I can not tell you.

Mr. MANN. I thought you said these matters all passed through your hands.

Doctor DUDLEY. Not the commercial side of them.

Mr. MANN. I wanted to know what other railroad touched the Du Pont people. What ones in New Jersey, for example?

Doctor DUDLEY. I can not tell you, except perhaps the Wilmington and Northern, the Philadelphia and Reading, the Central Railroad of New Jersey, and the Pennsylvania Railroad.

I want to say one more thing: Unless you deceive yourselves a little bit, this pamphlet likewise contains a list of about 1,500 magazines in addition to manufactories. It is believed that the number

of magazines in existence is over 1,800, and possibly 2,000. We have not got them all located yet. The bureau for the safe transportation of explosives and other dangerous articles has only been in existence seven months. One magazine may serve as a point of departure for a lot of explosives. The whole data are here in this pamphlet, so far as we have got them at present. The information is not complete yet.

Mr. MANN. In considering these regulations have you consulted any other manufacturers of explosives?

Doctor DUDLEY. Yes, sir; a very large number of them, and I would like to mention for your information a very interesting feature: This is the annual report of the bureau for the safe transportation of explosives and other dangerous articles [indicating].

Mr. MANN. Have you been in consultation in that connection with any of the representatives of the Du Pont Company?

Doctor DUDLEY. Yes, sir; we have been in consultation with them and with others. I will give you the whole thing in a minute. It has been made plain that since the responsibility for any explosions in transit rests entirely upon them, the railroads, through the American Railroad Association, must retain the right to make a final decision on regulations. The members of this conference committee at the present time are Mr. H. M. Barksdale, vice-president E. I. du Pont Company; Mr. F. W. Olin, president Equitable Powder Company; Mr. M. Ballou, president American Powder Mills; Mr. A. G. Fay, president Ætna Powder Company; Mr. C. W. Shaffer, secretary and general manager National Powder Company; Mr. F. L. Masury, Masurite Company; Mr. F. K. Brewster, secretary and treasurer Metallic Cap Manufacturing Company; Mr. W. I. Koller, president Association of Manufacturers of Powder and High Explosives; and Mr. G. W. Traer, president Illinois Coal Operators' Association.

Mr. Traer was before us recently in conference urging that the familiarizing influence of packing and transportation on the user is a means of preventing accidents in mines.

Mr. MANN. So far as I am concerned, I am in sympathy with the movement along the line you are working on; but I have heard it stated that the regulations you are preparing under that bill would practically shut out many of the independent manufacturers of explosives, so called, and prevent the institution of new concerns, and that that is one of the designs behind this bill.

Doctor DUDLEY. I would like to say in answer to that that——

Mr. MANN. I do not think that is your design, or the design of the Pennsylvania Railroad Company, but——

Doctor DUDLEY. No. I would like to say in answer to that that that self-same accusation has been made right in the face of Major Dunn by the independent people: "You are acting only in the interest of the trust, and we know it." That is a perfectly fair accusation to make, and there is no reason in the world why anybody should not make it if they want to. But see what the facts are. At that time, with Major Dunn in his seat two months——

Mr. RYAN. Who is Major Dunn?

Doctor DUDLEY. He is the chief inspector of the bureau of explosives.

Mr. RYAN. What railroad is he employed by?

Doctor DUDLEY. He is the employee of all the railroads that joined the bureau. His record is as follows: He invented dunnite, which is the greatest explosive used in armor-piercing shells. It is the only thing that will penetrate a 10-inch armor plate and burst after it gets through. In speaking of the composition of that he said to me: "I am under the most solemn obligations to the United States Army not to reveal how it is made, and never to let it get into the hands of any other manufacturer." Now he is in the Ordnance Corps of the United States Army. He is one of General Crozier's most trusted and reliable subordinates, and we had a perfect "picnic," as you might say, to get him. We had to go even so far as the President of the United States and the Secretary of War in order to get him. He has been detailed by order of the Secretary of War as a matter of public policy—not given a leave of absence, but detailed, to bring order out of this chaos in regard to the quality and transportation of high explosives.

Mr. MANN. Do you pay him anything in addition to his salary?

Doctor DUDLEY. Yes, sir.

Mr. MANN. By permission of the president?

Doctor DUDLEY. I can not say.

Mr. BARTLETT. It would be a violation of law.

Mr. MANN. How much do you pay him?

Doctor DUDLEY. We pay him $7,500 a year.

Mr. MANN. In addition to his salary?

Doctor DUDLEY. I do not know what his salary is. We pay him that much.

Mr. ADAMSON. You say the railroads combined and employ him?

Doctor DUDLEY. Yes, sir.

Mr. ADAMSON. That makes a trust out of it. [Laughter.]

Doctor DUDLEY. When you get into the trust question, gentlemen, you are more competent to speak than I am; but I am very glad indeed that you raised the question.

Mr. MANN. I made no accusation.

Mr. BARTLETT. You said Major Dunn made the accusation.

Doctor DUDLEY. No; I said he was accused by the outside manufacturers, the independents, so called.

Mr. BARTLETT. By the people who did not employ him?

Doctor DUDLEY. Yes.

Mr. SHERMAN. He is not employed by any other manufacturers, he is simply employed by the transportation companies.

Doctor DUDLEY. Major Dunn said: "I think we would like to meet that accusation. We have put an embargo on two factories because they have failed to carry out the regulations." As it happened, both those factories belong to what you call the trust.

Mr. SHERMAN. You say to "what is called the trust?"

Doctor DUDLEY. Yes; to what is called the trust. Now, if there is anything anywhere that indicates that the bureau of explosives is not doing the fair, straightforward, and honest thing in a most sincere and earnest effort to bring order out of chaos and to solve this enormous problem of safe transportation of explosives in this country I shall welcome that information.

Mr. MANN. I have no reason to doubt the railroads of the country, and I have no reason to doubt the others; but I asked because, if the so-called powder trust helped to make the regulations, it would not be

difficult to make regulations that would be very onerous to some one else.

Doctor DUDLEY. The powder trust, so called——

Mr. BARTLETT. Is there not a powder trust?

Doctor DUDLEY. Don't ask me. I don't know anything about it. I don't know anything about the organization. I have none of their stock, and have nothing to do with anything but technical matters. I can talk to a finish about the technical side of the question. Of the nine members of the advisory board, one is a member of the trust and the remaining eight are independent.

Mr. ADAMSON. Which is the trust?

Doctor DUDLEY. The so-called trust? [Laughter]. Excuse my slipping on language, but——

Mr. MANN. In your bill you provide that no vessels can be used for the carrying of explosives that are used for carrying passengers. Of course that affects the carriage of explosives on the Great Lakes, where considerable quantities are used. I understand that somebody said yesterday that the Du Pont people had special boats for the carriage of explosives. Would not that give them a monopoly for the carriage of explosives on the Lakes?

Doctor DUDLEY. On commercial matters you will find me pretty lame. I am inclined to go down on one side when you talk commercial matters. I have nothing to do with that side of it. The point I would make is this, however, that the transportation of explosives by water is largely by schooners and smaller vessels.

Mr. DWINNELL. We have never shipped any dynamite or explosives of that character on passenger boats on the Lakes. I understand most of it is done by rail.

Mr. RYAN. Who do you mean by "we?"

Mr. DWINNELL. Du Pont.

Mr. MANN. Considerable quantities are shipped on passenger boats, and on special boats in doing their work on the Lakes.

Mr. DWINNELL. In a case where we have to send large quantities we use our own boats.

Mr. MANN. I do not know of any freighters that would carry anything of the sort, according to my observation.

Mr. SHERMAN. Proceed, Doctor.

Doctor DUDLEY. Well, gentlemen, have you any further questions to ask in regard to further features of the bill?

Mr. RUSSELL. I want to ask about section 4. Do you mean to so word section 4 that nothing except liquid nitroglycerin and the other explosive mentioned in that section can be shipped?

Doctor DUDLEY. No; we mean that those two can never be shipped.

Mr. RUSSELL. You say:

> That it shall be unlawful to transport, carry, or convey liquid nitroglycerin, fulminate in bulk in dry condition, or other like explosive between a place in a foreign country and a place within the United States, or a place in one State, Territory, or District of the United States and a place in any other State, Territory, or District thereof, on any vessel or vehicle of any description operated by a common carrier in the transportation of passengers or articles of commerce by land or water.

Do you mean to exclude that entirely from shipment?

Doctor DUDLEY. Yes, sir. I would like to expand upon that just a little bit. The liquid nitroglycerin, the liquid itself, looks much much like the ordinary bottle of glycerin. The process of manufacture

does not change the nature or appearance of it much. It is not transported or used, so far as my knowledge goes, anywhere or in any way excepting in torpedoing wells. No railroad company ever thinks of such a thing as carrying liquid nitroglycerin, nor do they think of carrying such a thing as dry fulminate of mercury. That is the material used in the manufacture of the percussion cap.

Mr. RUSSELL. How do you get it from one place to another?

Doctor DUDLEY. We do not carry it. It is made up into dynamite. Dynamite, as I tried to explain yesterday, is wood pulp, nitrate of soda, sulphur, and other constituents 40 pounds, and 60 pounds of liquid nitroglycerin put in and stirred together, and the material when so made looks very much like brown sugar. That is the material that we are transporting—wood pulp, nitrate of soda, sulphur, and other constituents.

Mr. BARTLETT. How are you going to get the nitroglycerin to the place of mixing if you can not transport it?

Doctor DUDLEY. That is done inside the works.

Mr. MANN. When you get it transported, these gentlemen want to to know whether you pound out the nitroglycerin. [Laughter.]

Mr. ESCH. How do you get out the nitroglycerin?

Doctor DUDLEY. It is a very simple process. We will suppose there is a large wooden tub or iron vessel—because iron vessels are now used—that will hold, maybe, 5 or 6 barrels, or perhaps 10 barrels. Into that is placed a mixture of the strongest sulphuric and nitric acid that can be made. Then into this mixture, which is previously made the day before, so that it may cool off, for it generates some heat when the acids are put together—with this is put, in the large tub, liquid glycerin, the ordinary simple glycerin that you can buy ordinarily in the drug store or anywhere. That is poured in in a stream, and agitation takes place, and the nitric acid under those conditions combines chemically with the glycerin, forming——

Mr. RUSSELL. What becomes of the sulphuric acid?

Doctor DUDLEY. The nitroglycerin as fast as formed is insoluble and settles to the bottom, if allowed to stand. This combination of the glycerin with the nitric acid generates heat, and it is essential and necessary to keep the thing cold in some way, usually by surrounding the vessel with ice. If we do not abstract that heat which is formed by the chemical combination about as fast as it is formed—and there is a thermometer, and that is what the man who makes it keeps his eye on—if we do not keep the temperature down the whole batch will blow up by its own heat, and that is the cause of the frightful explosions that frequently take place in explosive manufactories. The stuff gets hot, and the whole thing goes up. Now, then, let us suppose we have our glycerin poured in and properly mixed, and the whole thing is done. It takes half or three-quarters of an hour, the whole operation. The acid is on top and the nitroglycerin is on the bottom. The old method used to be to take out a plug in the bottom and allow the whole thing to run into another tub about ten times as big, with water in it to get rid of the acids. At present the acids are drawn off, to be used over again. After the principal proportion of the acids has been drawn off the nitroglycerin is dropped into a large tub with a large amount of water in it and washed, to wash the excess of acid out. Very well. After the first washing the water is thrown away, and then a second one, and then it is treated with a solution of caustic—a

caustic solution, which is an alkali and combines with any acid that is left. Now, if the free acid not combined is not removed, the resulting nitroglycerin is so intensely sensitive to shock that it will be very hazardous to transport, and one of the regulations we have here is to cover that very point of the actual neutralization of the nitroglycerin when formed. Then after it is washed and neutralized it is taken frequently in rubber or leather hose down to the mixing factory, or a man, according to the old practice, would take a couple of rubber bags of it and carry it from the nitroglycerin house to the mixing house.

Mr. ADAMSON. You would not allow anybody but religious men, who are ready to go, to carry those bags? [Laughter.]

Doctor DUDLEY. I myself have stood at the side of a tank with 3,000 pounds of nitroglycerin in it, and I was very respectful at the time. [Laughter.] One of the Du Ponts who was connected with the business subsequently lost his life by an unforeseen and unexpected explosion at that very point.

Mr. RUSSELL. I was asking for information. What part does the sulphuric acid play in the manufacture of this product?

Doctor DUDLEY. So far as we know, it keeps the nitric acid concentrated. Water, H_2O, as the chemists state it, is separated from the glycerin in the process of nitrification. Now, the water that is formed would dilute the nitric acid if nitric acid alone were used, and in a short time you would not get sufficient strength, or you would not have sufficient strength, owing to the dilution of the nitric acid, to produce the proper combination. Now, by the use of sulphuric acid, which is very fond of water, it takes the water and keeps the nitric acid concentrated. That is the function of the nitric acid.

Mr. RUSSELL. You spoke of drawing off the acid and letting the nitroglycerin off into a tub of water. Is the nitroglycerin in liquid form?

Doctor DUDLEY. Yes, sir. If I had a bottle of the commercial glycerin here and a bottle of the nitroglycerin here, you could hardly tell the difference. It is of a yellowish, slightly amber color.

Mr. RUSSELL. The nitroglycerin is of greater specific gravity than the water?

Doctor DUDLEY. Yes; considerably greater.

Now, coming back to the question of the transportation of liquid nitroglycerin, there are two substances that are so hazardous to move from one place to another that by agreement all over the world, so far as I know, no transportation company or common carrier attempts to carry them, so that we simply put that clause in the bill as a prohibition, covering liquid nitroglycerin and dry fulminate of mercury.

If you care to listen to this—I can talk from now until to-morrow night, I am so full of information on the subject—I may say that liquid nitroglycerin is carried in spring wagons, and usually in the back part of the spring wagon are compartments where the material is put up in tin cans and cushioned. That material is used for shooting wells. You may have an oil well 200 feet deep, and slowly the quantity of oil begins to diminish. That is the history of all wells. At first it may have been a well of 100 barrels a day, and now it may be only 5 barrels a day. They slip one of these cans down to the bottom with an exploder, with an electric wire attached. The men who do this are called "well shooters." When the thing gets to the

bottom it makes a deuce of a racket and breaks up the strata, and your oil comes up, and the well is restored to a good measure of its former productiveness.

Mr. BARTLETT. How far will they carry that in that way?

Doctor DUDLEY. Fifteen or 20 miles.

Mr. SHERMAN. Tell us what is fulminate of mercury?

Doctor DUDLEY. It is a material produced by the action of nitric acid on metallic mercury in the presence of ordinary grain alcohol. The mercury and alcohol being in a vessel, if you pour in nitric acid immediately a combination takes place between the alcohol, the nitric acid, and the mercury, with the evolution of dense red fumes and the generation of a great deal of heat. The resulting product is a granular gray-looking substance that is subsequently washed free from acid, and in a wet condition is unexplodable except by very violent detonations. In the dry condition it is so sensitive that if I had a crumb of it here and rubbed my knife across it that way [indicating] I could explode it without difficulty. It is a material used everywhere for firing big guns, and used in all ammunition almost exclusively. There are a few other substances used as detonators, but not many.

To show you what this means, during the Spanish-American war I received a message from our superintendent of transportation: "Is it safe to accept a cargo of fulminate of mercury from Philadelphia to Frankford Arsenal?" We had to look up the subject, and we found that where that fulminate of mercury is transported in perfect safety and without accident it must be wet. Our regulations provide how it shall be packed in order to make it safe for transportation. But in a dry condition, that and liquid nitroglycerin never could be transported anywhere by anybody. The ordinary history of the "well shooter" is that I believe there is one lone survivor left in Pennsylvania. He has retired from the business, and he is the only one who has been in the business who has not lost his life sooner or later. That is true, gentlemen. I saw the other day that this man had retired from the business.

Mr. SHERMAN. That is, voluntarily; the others involuntarily. [Laughter.]

Mr. ESCH. But the others were elevated. [Laughter.]

Doctor DUDLEY. Yes. Now, gentlemen, are there any other fea ures that you would like to know about? If not, I would like to say just two or three words especially. I have already stated to you——

Mr. BARTLETT. I would like to ask a question with reference to Major Dunn. What position does he hold under the bureau?

Doctor DUDLEY. He is the chief inspector under the bureau of explosives.

Mr. BARTLETT. He holds that under General Crozier?

Doctor DUDLEY. His army position is under General Crozier.

Mr. BARTLETT. How long has he been there?

Doctor DUDLEY. I can not tell you. Probably about thirty years; somewhere near that.

Mr. BARTLETT. Now go ahead.

Doctor DUDLEY. I was going to say that the magnitude of this problem for the safe transportation of explosives is not yet fully appreciated hardly by ourselves, who have studied it most. We have been appalled almost by the size and magnitude of what we

have undertaken to do. To show you, I might say modestly that I was as well informed on this subject as anyone in the United States, so far as transportation goes. I drew the very first regulations ever drawn in the United States, so far as I know, in regard to the transportation of explosives; a single page, about two-thirds of a page, of printed matter. The thing has grown from small to great.

I would like to say further, gentlemen, that when we first started out I said, "We will start with five inspectors." Within two months we had 12, and within two months more we increased the number to 17, with authority to go to 25 as fast as the finances would admit, and we have only got over about one-third of the country yet in our first inspection. Although we have been seven months at work, we have only gotten over about one-third of the country.

Two points of the most vital importance in the transportation of explosives have been developed by the work of the bureau, which very few of us best informed appreciate: First, the number of magazines, each of which may serve as the point of departure for shipments; and more important still, that as the necessary consequence of storage high explosives deteroriate. Consequently a shipment from a magazine may be more dangerous than a shipment from the manufactory direct. The second thing, is that a very large percentage of the cars under the present practice reach destination with the "staying," as we call it—the thing that holds the boxes of explosives in position—broken down more or less, and consequently there is a greater breaking open of packages due to the unavoidable shocks of transportation than is necessary to take place.

Now, this matter was taken in hand with the most careful study. We spent two years making our first draft of regulations. We got that before the American Railway Association, and it went through without criticism, because everybody was beginning to recognize the importance of the problem. We allowed it to run a year with the efforts in use of the railroads ordinarily to enforce the regulations. Then we found that did not work. The regulations were not properly enforced. Then we established the bureau; and now, as I say, we are trying to handle this problem with cooperation both on the part of the manufacturers and the transportation companies. We decided to ask Congress for the least possible that we could ask.

Let us try to handle this problem ourselves first. If we make a mess of it and go to pieces, it is not needed for me to say what your public duty is. But we are trying to handle it. It is going to cost $150,000 a year to run the bureau. We have only asked you for three things, practically: First, to remove the body of antiquated legislation which at present is a menace, and which in the present conditions of Executive feeling toward corporations may at any time cause us serious difficulty.

Mr. MANN. Can you furnish to us, or furnish to the stenographer, a reference to the laws which this bill would repeal if enacted into law?

Doctor DUDLEY. I can give you the numbers of the Revised Statutes which are especially obnoxious.

Mr. MANN. Can you give that list to the stenographer?

Doctor DUDLEY. Yes.

Following is the compilation referred to:

SEC. 4279. It shall not be lawful to ship, send, or forward any quantity of the substances or articles named in the preceding section, or to transport, convey, or carry the same by a vessel or vehicle of any description, upon land or water, between a place in a foreign country and a place within the United States, or between a place in one State, Territory, or District of the United States, and a place in any other State, Territory, or District thereof, unless the same shall be securely inclosed, deposited, or packed in a metallic vessel surrounded by plaster of Paris, or other material that will be nonexplosive when saturated with such oil or substance, and separate from all other substances, and the outside of the package containing the same be marked, printed, or labeled in a conspicuous manner with the words "Nitroglycerin; dangerous."

SEC. 5353. Every person who knowingly transports or delivers, or causes to be delivered, nitroglycerin, nitroleum or blasting oil, or nitrated oil, or powder mixed with any such oil, or fiber saturated with any such substance or article, on board any vessel or vehicle whatever employed in conveying passengers by land or water between any place in a foreign country and any place within the United States, or between a place in one State, Territory, or District of the United States and a place in any other State, Territory, or District thereof, shall be punished by a fine of not less than one thousand dollars nor more than ten thousand dollars, one-half to the use of the informer.

SEC. 5354. When the death of any person is caused by the explosion of any quantity of such articles, or either of them, while the same is being placed upon any vessel or vehicle, to be transported in violation of the preceding section, or while the same is being so transported, or while the same is being removed from such vessel or vehicle, every person who knowingly placed or aided, or permitted the placing of such articles upon such vessel or vehicle, to be so transported, is guilty of manslaughter, and shall suffer imprisonment for a period not less than two years.

SEC. 5355. Every person who knowingly ships, sends, or forwards any quantity of the articles mentioned in section fifty-three hundred and fifty-three, or who transports the same by any mode of conveyance upon land or water, between any of the places specified in that section, unless such articles be securely inclosed, deposited, or packed in a metallic vessel surrounded by plaster of Paris or other nonexplosive material when saturated with such oil, and separated from all other substances, and the outside of the package be marked, printed, or labeled in a conspicuous manner with the words "Nitroglycerin; dangerous," shall be punished by a fine of not less than one thousand nor more than five thousand dollars, one-half to the use of the informer.

Also section 4578.

Doctor DUDLEY. Then we wanted protection against false billing, whereby, as I explained to you yesterday, if a rate is involved we do not have any safety if there is danger in the material shipped. We wanted that as a help in the handling of this problem. Then we wanted a clear recognition in the statutes that certain explosives should not be handled at all except as a matter of precaution and general information. Then we wanted to have you let us manipulate this matter, or give us a flexible section that would enable us to keep up with the changes that are coming every day. That is section 2, and the proviso particularly, to get a quick decision as soon as we could get it.

I will only add that my heart is in this matter. I have worked on it day and night for years. I have been through quantities of powder manufactories. I was offered the chief inspectorship of the bureau, but could not take it. I think we got a better man, if you will allow me to say so. And I really feel, if you will allow me to put it so far, that I would like to close with one question: Is it not safe and better and wise, with the knowledge you have, to give us this bill and let us go ahead?

Mr. ADAMSON. Mr. Chairman, I feel that we would not have exercised due courtesy if we adjourned without giving Doctor Burton a show in this hearing. He knows all about the production of those

explosives which are made in that little peach orchard of his which we call the State of Delaware. [Laughter.]

Representative BURTON, of Delaware. I thank you, Mr. Adamson, and gentlemen; but I just came in for the purpose of acquiring information, not of imparting any or of speaking.

Mr. SHERMAN. Have you any remarks to make, Mr. Dwinnell?

Mr. DWINNELL. There is one suggestion I would like to answer, and that is as to the alleged self-interest of the powder manufacturers.

Mr. SHERMAN. You are the counsel for the association?

Mr. DWINNELL. No.

Mr. SHERMAN. Tell us what you are.

Mr. DWINNELL. I am the general manager of the development department of the E. I. du Pont de Nemours Powder Company. I want simply to say a word in answer to the suggestion regarding that section which provides that no explosives shall be carried on vessels, and to say that no advantage would go to our company, and that I do not know of any company having a monopoly of the lake ports. I want to deny that the section referring to vessels was dictated by or inserted through self-interest. The best answer to that is the fact that the present law provides that anyone shipping explosives on commercial or passenger boats is, according to that provision, subject to fine and imprisonment now.

Mr. SHERMAN. What section is that?

Mr. DWINNELL. We incorporated the same provision in the first section of the proposed law.

Mr. SHERMAN. Is it the section numbered 4279 of the Revised Statutes, regarding nitroglycerin?

Doctor DUDLEY. Yes, sir.

Mr. ESCH. We raised the question the other day when Mr. Sherman brought this bill up that that section might make it embarrassing to ship explosives down to the Isthmus of Panama.

Mr. MANN. As a matter of fact, they do not carry explosives on our regular passenger boats. They are taken down on other boats exclusively.

Mr. STEVENS. Have you made any examination anywhere showing specifically as to each one of the statutes you wish to supplant the reason why it is objectionable?

Doctor DUDLEY. Yes; and I will file it if you will allow me.

Mr. STEVENS. I would like to have some statement on that somewhere.

Doctor DUDLEY. I think that would be well. The section I referred to is section 4279 of the Revised Statutes. This [indicating] is the copy that was asked for. I will give it to the stenographer after I have finished here. It provides that "it shall not be lawful to ship, send, or forward any quantity of the substances or articles named in the preceding section." Section 4278 gives the names of the substances. For our purposes nitroglycerin or nitroglycerin mixed with the absorbent is the one we are concerned about. And here is the point at issue: "Unless the same shall be securely inclosed, deposited, or packed in a metallic vessel surrounded by plaster of Paris or other material that will be nonexplosive when saturated" with nitroglycerin. There is no such substance known. The law is an absurdity on the face of it. You can fire a big gun with a mixture of nitroglycerin and plaster of Paris. It is a tip-top explosive. There is no

such substance. The law itself, as I say, is an absurdity on its face; that is, it contains something that is contrary to a matter of fact.

Then there is the metallic vessel. At present wooden boxes are used for the transportation of dynamite—not liquid nitroglycerin, but dynamite. A metallic vessel is a questionable vessel in which to handle a nitroglycerin product. The question of putting on the cover would be involved; and that, by any construction that we can think of—and we have gone over this matter very carefully—would bring two metallic surfaces together. If, now, the cartridges leak a little bit, owing to the fact that the box happens in some portion of the time to get upside down, or gets thrown out of condition in any way, or in handling it nitroglycerin gets between those two metallic surfaces, and then the box gets a bump, you will surely get an explosion. It is believed that some of the explosions that have taken place in transit have been due to nitroglycerin leaking out a little bit and getting between a nail head in the box and a nail head in the floor of the car, and the ordinary jar of transportation would fire it.

The metallic vessel, judging from the best expert knowledge that I can get on the subject, is of questionable safety.

These statutes go on to say that for every offense a fine of $1,000 and imprisonment shall be imposed. If that law were enforced to-day the railroads would, as a matter of self-protection, be compelled to simply stop the transportation of explosives. And yet one-half of the money goes to the informer. Now, you can see what position we are in, sir.

Mr. BARTLETT. That has been the law for many years, has it not?

Doctor DUDLEY. It has been the law for many years, but it has apparently been, as we say, a "sleeping dog." I have never known a case in which that law has been cited, except one; and that was the case that I mentioned here a little while ago, against the Southern Railway. The explosion at Jellico is believed to have taken place as a result of firing into the car, using the car as a target and firing a rifle bullet into it. It is well known that if a single cartridge of nitroglycerin powder, dynamite, is held by a string and fired at with a bullet, if you strike it with the bullet the whole thing will go. That has been done again and again and again and again; and as one of the precautions, in our regulations we require the notice that says that this car has explosives in it, to be put not less than 4½ feet above the floor of the car. Why? Because if we put it lower down, where it will be a good deal handier to put it if the man goes along and tacks it onto the car, it might be used as a target. The lading of explosives rarely goes up above 4½ feet.

So those are the reasons why we want to have this antiquated legislation set aside and repealed, with the exception of section 4578. I supposed that was on this paper.

Mr. SHERMAN. You have it right on there.

Doctor DUDLEY. Yes—also section 4578; and I will turn this over to the stenographer.

Mr. SHERMAN. You mean 4278, do you not?

Doctor DUDLEY. Yes; 4278. Did I misread ?

Mr. BARTLETT. Forty-two hundred and seventy-eight.

Doctor DUDLEY. Forty-two hundred and seventy-eight; yes, sir.

The section referred to is as follows:

SEC. 4278. It shall not be lawful to transport, carry, or convey, ship, deliver on board, or cause to be delivered on board, the substance or article known or designated as nitroglycerin, or glynoin oil, nitroleum or blasting oil, or nitrated oil, or powder mixed with any such oil, or fiber saturated with any such article or substance, upon or in any vessel or vehicle used or employed in transporting passengers by land or water between a place in any foreign country and a place within the limits of any State, Territory, or District of the United States, or between a place in one State, Territory, or District of the United States and a place in any other State, Territory, or District thereof.

Mr. DWINNELL. I would like to say a word further. This law that we are considering to-day was drawn before dynamite was a commercial factor and before dynamite was shipped in this country. The man that framed the law either had wonderful foresight or had read in the scientific papers of the time of dynamite, which was being spoken of; but it was drawn several years before dynamite ever appeared as an article of commerce. It covers it perfectly, however; and if you were to stop (as the Doctor suggests it would be necessary to stop) the transportation of explosives, I think there is not a man in the room who has ever seen the panic that would occur within two weeks. Two-fifths of the revenues of the Pennsylvania Railroad Company come from explosives directly, as they estimate.

Doctor DUDLEY. From the freight produced by explosives.

Mr. DWINNELL. Yes; from the freight produced by explosives, coal and iron and limestone and all of the building materials; and what else is there? So that it is an important subject to the country in general to see that something is done. The railroad people claim that they can not continue under the present conditions, and if they were to enforce the regulations it would put us in a much worse position so far as safety is concerned; and it would be physically impossible for the manufacturers to comply with them within six or seven months, even. So it would result in a shutdown of necessity.

Mr. BARTLETT. What has awakened you now to the necessity for a modification of these laws, which have existed so long and have been violated in the transportation of explosives? Why is it that you are just realizing that they ought to be changed now, and you ought not to be allowed to continue to violate them?

Mr. DWINNELL. Three years ago Mr. McCrea, of the Pennsylvania Railroad Company, was interested in getting some legislation through. The bill introduced by him was objectionable to the powder manufacturers. I was down to watch the progress of that bill, and we opposed it as best we could.

Mr. BARTLETT. Who is Mr. McCrea?

Mr. DWINNELL. Mr. McCrea is the president of the Pennsylvania Railroad Company.

Mr. BARTLETT. Oh, yes.

Mr. DWINNELL. Our objection to it was based upon the ground that while it provided a tax, and quite a serious tax, upon our product, there was no resulting safety; and when the representatives of the railroads saw our side of the situation, they conceded, I think, the most of our argument. Our offer to them was that we were willing to concede a cost if it would make for safety; that we would concede anything in reason; and upon that basis we came together to work out a bill. In looking over this subject I read the Revised

Statutes of the United States in connection with it, and at once wrote to our people and called their attention to the law. Mr. McCrea, I think, called it to the attention of your people first, did he not?

Doctor DUDLEY. Yes, sir.

Mr. DWINNELL. That was within the past year, I think; and we had then to determine the question whether we would stop shipments and bring on serious trouble or comply with the law, or what we would do.

Mr. SHERMAN. Prior to that time, as I understand you, Mr. Dwinnell, you had both been acting practically in ignorance of the law?

Mr. DWINNELL. Yes, sir.

Mr. BARTLETT. What brought it to your attention?

Mr. DWINNELL. The act of Mr. McCrea in getting this legislation introduced.

Doctor DUDLEY. And that followed the Harrisburg action?

Mr. DWINNELL. Yes, sir. So that looking into the question of legislation, we naturally went into our own statutes.

The CHAIRMAN. In this legislation that seems to be satisfactory to the manufacturers, as you represent them, there is absolutely no prohibition at all or no requirement of them except that they shall not falsely invoice or mark packages. That is the only prohibition that there is upon you, is it not?

Mr. SHERMAN. Oh, they must go further; they must pack in certain ways.

Mr. DWINNELL. There are certain provisions as to packing and marking?

Mr. STEVENS. They must comply with the regulations.

Mr. SHERMAN. Yes.

Mr. DWINNELL. The product must be in satisfactory condition to ship. The one item alone of the new regulations will cost us, I think, something like $75,000 a year.

The CHAIRMAN. Well, even that regulation is one that you have something to say about? You are a part of this bureau, are you not?

Mr. DWINNELL. No; we are not a part of the bureau. They consult with us. We are like territorial delegates in that respect.

The CHAIRMAN. But you are quite satisfied that they would not adopt any regulation that was not entirely satisfactory to you?

Mr. DWINNELL. Well, if they did we would go to the courts.

The CHAIRMAN. In other words, there is not any imposition at all upon the manufacturer? It is all upon the carrier.

Mr. DWINNELL. No; the manufacturer must deliver it in satisfactory condition to them for handling, or they can refuse to take it; and what is satisfactory is well known. The tests are well known. I would like to ask you, by the way, Doctor, before you close, to explain your leaky dynamite again.

Doctor DUDLEY. I will be glad to do that.

Mr. DWINNELL. And the railroads would refuse to take it, as they can; besides which we can not afford to make it that way. It is too costly for us to rework it. It is cheaper to explode it.

The CHAIRMAN. It is all optional with you, after all. You say you can not afford to do it.

Mr. DWINNELL. I think the railroads have the whip hand in this respect.

The CHAIRMAN. You have not been obeying the law heretofore; you have been paying no attention to it heretofore.

Mr. DWINNELL. Oh, the package that we have is safer than the package provided by the law. The package provided by the law is an unsafe package.

The CHAIRMAN. And therefore you will not obey it?

Mr. DWINNELL. I do not know why they did not obey it. They were not obeying it; and when, as I say, he discovered this law and called their attention to it, it would have been impossible to have revolutionized the manufacture and made the change necessary to go to the tin package and the plaster of Paris casing. You have got to assemble all your raw materials, and have all those items to consider, besides this change of plant.

Mr. MANN. If this bill should become a law, you will repeal all the provisions which now relate to how explosives shall be packed?

Mr. DWINNELL. Yes, sir.

Mr. MANN. And then there is nothing left that requires you to pack them in any manner at all except as you may have regulations in force?

Mr. DWINNELL. Yes.

Mr. MANN. And you can dispute any of those?

Mr. DWINNELL. We have the right to raise the question as to their being reasonable.

The CHAIRMAN. Then there is, as I said before, nothing obligatory upon you except that you shall not be guilty of deceit in the marking of your packages?

Mr. DWINNELL. Well, I do not understand it as you do.

The CHAIRMAN. Please point out some of the prohibitive provisions of this statute, or some of the requirements that are imposed upon the manufacturer by this statute or by this bill.

Doctor DUDLEY. If you will allow me just a second, I think I can clear that up for you. The regulations issued by the railroad company provide the essential features of safety so far as safety is an element of manufacture.

The CHAIRMAN. Yes; I understand that, Doctor; but Mr. Dwinnell says they are not obligatory upon them, that they have no part in the making of them, and they of course reserve the right to dispute any of them.

Mr. DWINNELL. Section 3 provides that the common carriers shall, within three months, prescribe regulations.

The CHAIRMAN. Yes; and you will observe them or not, as you choose; and you have just now stated that you will dispute them in the courts.

Mr. DWINNELL. If we thought it was improper, and only so. That would be necessary.

The CHAIRMAN. So that there is not anything in this entire statute that bears in any prohibitive sense upon you or makes any requirement upon you, excepting that that is contained in section 5?

Mr. DWINNELL. As a manufacturer do you mean?

The CHAIRMAN. Yes.

Mr. DWINNELL. Not at all. More than that, I think it could not very well. It is not interstate.

The CHAIRMAN. It could not? You think Congress has no power——

Mr. DWINNELL. Not over the factory; no.

The CHAIRMAN (continuing). No power to legislate with regard to the manner in which you shall pack a dangerous explosive that is to be a part of interstate commerce?

Mr. DWINNELL. But it may not be. There are some plants that do not ship a pound outside of their States.

Mr. SHERMAN. Of course, in reference to that Colonel Hepburn's question does not apply. He does not mention any part that is shipped within a State. Colonel Hepburn's question expressly said that which was to enter into interstate commerce.

Mr. DWINNELL. I think they could take it at the door when it became interstate commerce. I do not think they could begin any farther back.

Mr. SHERMAN. What do you say?

Mr. DWINNELL. I think that when it became interstate commerce, then they could take charge of it.

Mr. BARTLETT. When it was manufactured for the purpose of interstate commerce?

The CHAIRMAN. After it left your possession?

Mr. DWINNELL. After it has started, yes; or, for that matter, when we have it piled up ready to be shipped and marked.

Mr. ESCH. If it is intended for interstate commerce, the Federal jurisdiction applies? Is that right?

Mr. DWINNELL. Yes; but what I mean is that they could not enter the door of our factory with their inspectors if they wanted to. That is something for the State.

The CHAIRMAN. Then up to this time, as I understand it, you, as a representative of manufacturers, have been impeding legislation?

Mr. DWINNELL. No.

The CHAIRMAN. And have been opposed to that that was heretofore proposed?

Mr. DWINNELL. We were impeding improper legislation, as was agreed to by those who offered it.

Mr. SHERMAN. I think you are in error there, Mr. Dwinnell. Were you opposing the bill that I introduced in the last Congress, and which passed the House?

Mr. DWINNELL. Yes, sir.

Mr. SHERMAN. I certainly do not concede that that was improper legislation, nor does any member of this committee, nor does any Member of the House.

Mr. DWINNELL. I did not mean it that way, Mr. Sherman. You misunderstood me. I should have said, instead of "improper," "legislation which did not provide all that was necessary." It covered a part of the subject; and when we came to look into the question of how it would act we discovered that in actual practice it would not work well.

The CHAIRMAN. Because the provisions were not sufficiently strenuous upon the manufacturer, and you, as a manufacturer, wanted more strenuous and vigorous legislation?

Mr. DWINNELL. No; it was strong enough, but we were none of us at that time as well schooled in explosives, and the transportation of explosives in particular, as we are now.

Mr. SHERMAN. That is all right.

Mr. DWINNELL. Yes; I certainly do not want that impression to go out, Mr. Sherman.

Mr. SHERMAN. But you stated distinctly that those who offered the proposed legislation admitted now that it was not proper. As a matter of fact, they do not.

Mr. DWINNELL. I say I take back the word "improper;" but Doctor Dudley, as you just saw, agreed that it should be withdrawn because it was imperfect.

Doctor DUDLEY. I think, gentlemen, there is a little misunderstanding. If you will allow me, I think I can straighten it out. The bill introduced by Mr. McCrea——

Mr. SHERMAN. Mr. McCrea did not introduce the bill.

Doctor DUDLEY. I beg your pardon, gentlemen—the bill fathered by Mr. McCrea.

Mr. MANN. It was fathered by Mr. Sherman.

Doctor DUDLEY. I stand corrected again.

Mr. SHERMAN. I do not know whether the bill I introduced was drawn by Mr. McCrea or not. I think it was not.

Doctor DUDLEY. I think you will find it was, sir, if you will allow me.

Mr. SHERMAN. I think you drew it yourself, Doctor.

Doctor DUDLEY. No; I did not. I tried to modify it, and I wish he had consulted me before the bill was drawn, if you will allow me to say so, and say it with deference to him.

Mr. SHERMAN. I then thought, and still think, the bill was absolutely proper and should have passed. I do not think it went far enough, but it was excellent as far as it did go.

Doctor DUDLEY. The bill that was withdrawn (you will remember, Colonel Hepburn, that Mr. McCrea wrote you a letter asking that you withdraw the bill) was withdrawn in the interest of allowing the transportation companies and manufacturers to see if they could not handle this problem themselves without legislation.

Mr. MANN. That was a bill introduced three or four years ago.

Doctor DUDLEY. That was three or four years ago. Then, subsequent to that, we still asked—and this, I think, is the bill that Mr. Sherman had in mind last winter—that Congress give us protection against false billing.

Mr. SHERMAN. Yes; that is the bill.

Doctor DUDLEY. That is right; and I think that was most eminently proper and desirable legislation; but it did not quite cover the ground, and did not give the same protection and help us as the present bill does. That is the point.

Mr. MANN. I think the bill the witness refers to was the first bill.

Mr. DWINNELL. The first bill was the one I meant. It was the one that Mr. McCrea discussed with him afterwards. I certainly was not referring to the one passed by this committee.

Mr. MANN. That was the first one we had before us, and that was reported out.

The CHAIRMAN. That was the bill that proposed to have some surveillance over the manufacturers, and that proposed to put some restraints upon them; and it was those restraints that these gentlemen were here opposing. They are in favor of this bill now because it does not impose any obligation upon them, excepting that it tries to keep them in the line of morals in avoiding deceit and false billing.

Mr. DWINNELL. We also objected to that bill because it went into the details of packing and marking, and in that respect it was just as

objectionable as any other bill. But I trust, Mr. Sherman, that you understand my correction. I am glad it is cleared up. I had no intention of——

Mr. SHERMAN. I simply did not propose to have it go in the record that I said that the bill which I had introduced, and which this committee had unanimously passed, was not a proper bill.

Mr. DWINNELL. Well, the bill was withdrawn.

Mr. SHERMAN. The bill was not withdrawn. The bill passed this House. It failed to pass the Senate.

Mr. DWINNELL. I mean the one that I am talking about.

Mr. SHERMAN. But you said it was my bill. You are speaking of another bill. Let us have the record straight; that is all I desire. In what you said a while ago, then, you had no reference to the bill which I introduced in the last Congress, and which this committee reported, and the House of Representatives passed?

Mr. DWINNELL. Not at all.

Mr. SHERMAN. That is all; I simply wanted to get it right on the record.

Mr. MANN. Will this proposed legislation give the powder trust an advantage over the independent concerns in enforcing regulations which might be to the advantage of the trust? You will have considerable influence in the making of these regulations.

Mr. DWINNELL. The regulations will be made—your committee will make them, Doctor, will they not?

Doctor DUDLEY. The regulations——

Mr. MANN. I am trying to get the information from Mr. Dwinnell.

Mr. DWINNELL (continuing). And then referred to this committee of ours?

Doctor DUDLEY. The present regulations that are in force now were made by the committee of the American Railroad Association. Mr. McCrea was chairman; I was one of the members, and Mr. Marr was another, and so on.

Mr. MANN. We went over that before.

Doctor DUDLEY. The regulations proposed, which are a revision of those, were made by the bureau, by Major Dunn, Mr. Ellis, the secretary of the Railroad Association, and myself in consultation with the manufacturers, as I have already given the names.

Mr. MANN. Yes; you testified to all of that, Doctor, very fully.

Doctor DUDLEY. Yes.

Mr. DWINNELL. I do not know that there will be any advantage to anyone in the rules. I do not know what it would be.

Mr. MANN. You are the largest shippers of powder, are you not?

Mr. DWINNELL. Yes; we are the largest shippers.

Mr. MANN. And you necessarily have considerable influence with the railroads over which you may or may not ship?

Mr. DWINNELL. I suppose we would have the same influence that usually goes with the amount of shipments.

Mr. MANN. And these regulations will be made up, probably, to suit you?

Mr. DWINNELL. No, sir; that has not been their attitude.

Mr. MANN. Well, that is your attitude, as you expect the regulations will be satisfactory; you are opposed to any proposition which would not leave them so that they could be satisfactory?

Mr. DWINNELL. When I said that we would oppose any improper regulations, I meant to say, take a case where they should insist upon

some regulation which did not make for safety in any way, which they were willing to concede did not make for safety, which could bring no possible benefit to anyone, and which would add to the cost.

Mr. MANN. Yes; but you expect to be the judge of that?

Mr. DWINNELL. No; the courts will be the judge of that.

Mr. MANN. But here are regulations which are voluntary regulations as far as this bill is concerned, made after consultation with you. Might it not easily be that you could procure provisions in those regulations which would redound to the benefit of the powder trust and result in great injury to the independent concerns?

Mr. DWINNELL. No, sir; I do not believe the railroads would permit it.

Mr. SHERMAN. Now, Mr. Dwinnell, if that is all you have to suggest I will ask General Humphrey if he desires to be heard on this matter?

General HUMPHREY. No, sir.

Mr. BARTLETT. I want to ask this gentleman one or two more questions. Do I understand you to say that you are a lawyer, Mr. Dwinnell?

Mr. DWINNELL. Yes, sir.

Mr. BARTLETT. What sort of an indictment could you frame against a man under section 5 for simply violating the regulations prescribed for the transportation of dynamite or other explosives by yourselves and the railroads? How could you convict him of committing a crime? You say in section 6 that it shall be a crime for a man to violate any of the provisions of this law, and you prescribe that regulations about this kind of transportation shall be made not by Congress but by railroads and shippers.

Mr. DWINNELL. I think it would be in the ordinary course.

Mr. BARTLETT. You think you could prescribe that it should be a crime to violate not a law passed by Congress but a law made by private individuals or corporations? Do you think you could convict anybody under that provision?

Mr. DWINNELL. It was our intention to have it so that they could be convicted. To tell you the truth about it, I do not claim to be an expert——

Mr. STEVENS. That is not the statute.

Mr. DWINNELL. In drawing the bill we did the best we could, as Doctor Dudley has well said.

Mr. STEVENS. If they do not make regulations, then it is illegal; but if they do make regulations, it is legal.

Mr. BARTLETT. I understand that, but suppose they make regulations and they are violated in the way of transportation?

Mr. STEVENS. There is no penalty for that.

Mr. BARTLETT. Exactly. Then how will you enforce this law, if there is no penalty for violating the regulations?

Mr. SHERMAN. Mr. Chairman, it is quite evident that we will need to take this matter up in executive session, and inasmuch as General Humphrey said he did not desire to be heard——

Mr. BURTON. Mr. Chairman, may I ask a question? I would like to ask for an explanation of how the fact that any powder company or manufacturer of explosives owned vessels of their own on the Great Lakes for the transportation of their product could give them a monopoly. That question was asked.

Mr. MANN. I should think the answer would be so simple that it would not need an answer.

Mr. BURTON. Why? Could not any other company own a vessel and use it on the Great Lakes for that purpose?

(An informal discussion followed.)

Mr. BARTLETT. I want to ask this gentleman a question. You represent the Du Pont Company, do you, as superintendent of it?

Mr. DWINNELL. Yes.

Mr. BARTLETT. It has been spoken of as a trust. It is a trust, is it not—a combination?

Mr. DWINNELL. Not that I know of.

Mr. BARTLETT. You do not know that it is?

Mr. DWINNELL. No, sir. You will have to find some one else to answer that question.

Mr. BARTLETT. They do not let you know about that?

Mr. DWINNELL. If they are, I do not know anything about it.

Mr. STEVENS. There is one question I would like to ask. In section 4, at the top of page 3, the word "like" is used. What does that have reference to?

Mr. DWINNELL. They are discovering every once in a while some new high explosive.

Mr. STEVENS. Does it have reference to extremely sensitive explosives or does it have reference to the general subject of high explosives? I think it is very important for you to define that.

Doctor DUDLEY. May I answer that?

Mr. STEVENS. Somebody ought to answer it.

Doctor DUDLEY. Fulminate of silver is an exactly similar material to fulminate of mercury, only more sensitive; so that clause was put in to cover that or any other similar behaving material.

Mr. STEVENS. Why do you not say "or similar sensitive explosive?"

Doctor DUDLEY. That might be wise. We thought we had covered it; but I would not criticise your wording at all.

Mr. STEVENS. The word "like" might be construed broadly to cover any high explosive; and that would prohibit the transportation of any high explosive, which you do not want to do.

Doctor DUDLEY. No; that is right. I did not see any ambiguity at the time, but possibly there is one there. "Or other like explosive"—that is, fulminate of mercury in bulk, in dry condition—"or anything as dangerous as liquid nitroglycerin," we would say.

The CHAIRMAN. "Or other like sensitive explosive."

Doctor DUDLEY. That would confine it, then, wholly to the fulminates, would it not?

The CHAIRMAN. I do not know about that.

Doctor DUDLEY. Possibly it would be well to say, "or other as dangerous."

Mr. SHERMAN. "Equally explosive."

Doctor DUDLEY. That would involve the strength of the explosive.

Mr. DWINNELL. That would drag in gun cotton again.

Doctor DUDLEY. Yes; we are treading on a pretty narrow margin here, and almost every one of these words has been squabbled over among ourselves in trying to get this thing in a shape where we would not run across snags.

The CHAIRMAN. How would "perilous" do?

Mr. BARTLETT. I want to ask this gentleman one other question, and then I believe I will be through. If we do not permit the manu-

facturers or the railroads to have the dispute referred to the Interstate Commerce Commission, and then after that a right of appeal to the courts as provided, will you then be in favor of this bill, whether that provision is in or not?

Mr. DWINNELL. Certainly.

Mr. BARTLETT. You do not want that in?

Mr. DWINNELL. I do not know that we do.

Mr. SHERMAN. He would favor it either way, as I understood him.

Mr. DWINNELL. Any way. The thing we are anxious about is this: There was a bill that passed the House last year and did not go through, and we want that to go through.

Mr. SHERMAN. You want the bill that was passed last year?

Mr. DWINNELL. Yes; there was one passed last year by the House, and it went to the Senate, I should say, and I think it was opposed there and did not become a law.

Mr. SHERMAN. Yes.

Mr. DWINNELL. Now, we want that to pass.

Mr. BARTLETT. Do you want that or this?

Mr. DWINNELL. Well, that is the same thing; it has been incorporated——

Mr. SHERMAN. The provisions of that bill, Mr. Bartlett, are in this bill; but this bill does a lot that the bill of last year does not do.

Mr. BARTLETT. Then you do not want this bill?

Mr. DWINNELL. Yes.

Mr. BARTLETT. Which one do you want? Do you want the one that was passed last year or this one?

Mr. DWINNEL. The one that passed last year did not go far enough. That would be all right.

Mr. SHERMAN. Please answer that question plainly. Do you want this bill or last year's bill?

Mr. DWINNELL. We want this one.

The CHAIRMAN. I would like to ask you a question. Are the products of the Du Pont Powder Company and its associate companies covered by patents in any way, or are their methods protected by patents?

Mr. DWINNELL. We have patents; naturally we are getting patents all the time.

The CHAIRMAN. I ask with reference more particularly to smokeless powder.

Mr. DWINNELL. To commercial powder—why, I think there is no patent covering smokeless powder.

The CHAIRMAN. Or any of the processes or methods?

Mr. DWINNELL. Excepting a new powder we have, and that probably will not be patented after all.

Mr. MANN. If you patent it, it makes it public; if you do not patent it, it is secret.

Mr. SHERMAN. Mr. Chairman, we shall need to fix a day hereafter for executive session. I will not ask the committee to fix it now. I move that we adjourn now.

Doctor DUDLEY. May I say, Colonel, that if any further information is wanted from me I shall be very glad to furnish it? There is nothing secret, nothing hidden, nothing as to which I do not want to give you all the information I have.

(The committee thereupon adjourned.)

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